- [0] validation\_0-error:0.232458 validation\_0-loglos s:0.662967 validation\_1-error:0.200794 validation\_1-logloss:0.659794
- Multiple eval metrics have been passed: 'validation\_1-logl oss' will be used for early stopping.
- Will train until validation\_1-logloss hasn't improved in 5 0 rounds.
- [1] validation\_0-error:0.232458 validation\_0-loglos s:0.638376 validation\_1-error:0.200794 validation\_1-logloss:0.632183
- [2] validation\_0-error:0.232458 validation\_0-loglos s:0.618162 validation\_1-error:0.200794 validation\_1-logloss:0.609828
- [3] validation\_0-error:0.232458 validation\_0-loglos s:0.601158 validation\_1-error:0.200794 validation\_1-logloss:0.590431
- [4] validation\_0-error:0.232458 validation\_0-loglos s:0.586832 validation\_1-error:0.200794 validation\_1-logloss:0.574498
- [5] validation\_0-error:0.232458 validation\_0-loglos s:0.574487 validation\_1-error:0.200794 validation\_1-logloss:0.560144
- [6] validation\_0-error:0.232458 validation\_0-loglos s:0.56383 validation\_1-error:0.200794 validation\_1-logloss:0.54819
- [7] validation\_0-error:0.232458 validation\_0-loglos s:0.55492 validation\_1-error:0.200794 validation\_1-logloss:0.537755
- [8] validation\_0-error:0.232458 validation\_0-loglos s:0.5473 validation\_1-error:0.200794 validation\_1-logloss:0.528863
- [9] validation\_0-error:0.232458 validation\_0-loglos s:0.540646 validation\_1-error:0.200794 validation\_1-logloss:0.52117
- [10] validation\_0-error:0.232458 validation\_0-loglos s:0.534635 validation\_1-error:0.200794 validation\_1-logloss:0.514327
- [11] validation\_0-error:0.232458 validation\_0-loglos s:0.529513 validation\_1-error:0.200794 validation\_1-logloss:0.508439
- [12] validation\_0-error:0.232458 validation\_0-loglos s:0.524863 validation\_1-error:0.200794 validation\_1-logloss:0.502997

- [13] validation\_0-error:0.232458 validation\_0-loglos s:0.520847 validation\_1-error:0.200794 validation\_1-logloss:0.498309
- [14] validation\_0-error:0.232458 validation\_0-loglos s:0.517231 validation\_1-error:0.200794 validation\_1-logloss:0.494671
- [15] validation\_0-error:0.232458 validation\_0-loglos s:0.513773 validation\_1-error:0.200794 validation\_1-logloss:0.490862
- [16] validation\_0-error:0.232458 validation\_0-loglos s:0.510742 validation\_1-error:0.200794 validation\_1-logloss:0.487168
- [17] validation\_0-error:0.232458 validation\_0-loglos s:0.507908 validation\_1-error:0.200794 validation\_1-logloss:0.483857
- [18] validation\_0-error:0.232458 validation\_0-loglos s:0.505049 validation\_1-error:0.200794 validation\_1-logloss:0.480594
- [19] validation\_0-error:0.232458 validation\_0-loglos s:0.502465 validation\_1-error:0.200794 validation\_1-logloss:0.477462
- [20] validation\_0-error:0.232458 validation\_0-loglos s:0.500185 validation\_1-error:0.200794 validation\_1-logloss:0.474965
- [21] validation\_0-error:0.232458 validation\_0-loglos s:0.497888 validation\_1-error:0.200794 validation\_1-logloss:0.472532
- [22] validation\_0-error:0.232458 validation\_0-loglos s:0.495527 validation\_1-error:0.200794 validation\_1-logloss:0.470097
- [23] validation\_0-error:0.232458 validation\_0-loglos s:0.493501 validation\_1-error:0.200794 validation\_1-logloss:0.468175
- [24] validation\_0-error:0.232458 validation\_0-loglos s:0.491543 validation\_1-error:0.200794 validation\_1-logloss:0.466228
- [25] validation\_0-error:0.232458 validation\_0-loglos s:0.489664 validation\_1-error:0.200794 validation\_1-logloss:0.464102
- [26] validation\_0-error:0.232458 validation\_0-loglos s:0.487683 validation\_1-error:0.200794 validation\_1-logloss:0.461875

- [27] validation\_0-error:0.232458 validation\_0-loglos s:0.485931 validation\_1-error:0.200794 validation\_1-logloss:0.459876
- [28] validation\_0-error:0.232458 validation\_0-loglos s:0.484172 validation\_1-error:0.200794 validation\_1-logloss:0.458402
- [29] validation\_0-error:0.232458 validation\_0-loglos s:0.48248 validation\_1-error:0.200794 validation\_1-logloss:0.456788
- [30] validation\_0-error:0.232458 validation\_0-loglos s:0.48077 validation\_1-error:0.200794 validation\_1-logloss:0.455499
- [31] validation\_0-error:0.232458 validation\_0-loglos s:0.479207 validation\_1-error:0.200794 validation\_1-logloss:0.453717
- [32] validation\_0-error:0.232038 validation\_0-loglos s:0.477426 validation\_1-error:0.200794 validation\_1-logloss:0.452141
- [33] validation\_0-error:0.231869 validation\_0-loglos s:0.475673 validation\_1-error:0.200794 validation\_1-logloss:0.450396
- [34] validation\_0-error:0.231659 validation\_0-loglos s:0.474129 validation\_1-error:0.200227 validation\_1-logloss:0.448949
- [35] validation\_0-error:0.231449 validation\_0-loglos s:0.472665 validation\_1-error:0.20051 validation\_1-logloss:0.447673
- [36] validation\_0-error:0.230944 validation\_0-loglos s:0.471128 validation\_1-error:0.199943 validation\_1-logloss:0.446075
- [37] validation\_0-error:0.230734 validation\_0-loglos s:0.469772 validation\_1-error:0.19966 validation\_1-logloss:0.444429
- [38] validation\_0-error:0.230313 validation\_0-loglos s:0.468245 validation\_1-error:0.19966 validation\_1-logloss:0.443216
- [39] validation\_0-error:0.229598 validation\_0-loglos s:0.466827 validation\_1-error:0.198242 validation\_1-logloss:0.442043
- [40] validation\_0-error:0.228336 validation\_0-loglos s:0.465447 validation\_1-error:0.197391 validation\_1-logloss:0.440854

- [41] validation\_0-error:0.227831 validation\_0-loglos s:0.464065 validation\_1-error:0.196256 validation\_1-logloss:0.439851
- [42] validation\_0-error:0.226779 validation\_0-loglos s:0.462751 validation\_1-error:0.196256 validation\_1-logloss:0.438905
- [43] validation\_0-error:0.226485 validation\_0-loglos s:0.461558 validation\_1-error:0.196256 validation\_1-logloss:0.437795
- [44] validation\_0-error:0.225475 validation\_0-loglos s:0.460281 validation\_1-error:0.195406 validation\_1-logloss:0.436618
- [45] validation\_0-error:0.225013 validation\_0-loglos s:0.458974 validation\_1-error:0.195406 validation\_1-logloss:0.435719
- [46] validation\_0-error:0.224171 validation\_0-loglos s:0.457763 validation\_1-error:0.194271 validation\_1-logloss:0.434434
- [47] validation\_0-error:0.223372 validation\_0-loglos s:0.456568 validation\_1-error:0.192286 validation\_1-logloss:0.43374
- [48] validation\_0-error:0.22232 validation\_0-loglos s:0.455327 validation\_1-error:0.191151 validation\_1-logloss:0.432431
- [49] validation\_0-error:0.221227 validation\_0-loglos s:0.454177 validation\_1-error:0.190584 validation\_1-logloss:0.431524
- [50] validation\_0-error:0.220133 validation\_0-loglos s:0.452907 validation\_1-error:0.190868 validation\_1-logloss:0.430597
- [51] validation\_0-error:0.218787 validation\_0-loglos s:0.451907 validation\_1-error:0.190301 validation\_1-logloss:0.429492
- [52] validation\_0-error:0.218408 validation\_0-loglos s:0.45091 validation\_1-error:0.189733 validation\_1-logloss:0.428473
- [53] validation\_0-error:0.217441 validation\_0-loglos s:0.449878 validation\_1-error:0.188599 validation\_1-logloss:0.427514
- [54] validation\_0-error:0.216978 validation\_0-loglos s:0.448766 validation\_1-error:0.188315 validation\_1-logloss:0.426458

- [55] validation\_0-error:0.216095 validation\_0-loglos s:0.447652 validation\_1-error:0.188032 validation\_1-logloss:0.425892
- [56] validation\_0-error:0.215421 validation\_0-loglos s:0.446567 validation\_1-error:0.187748 validation\_1-logloss:0.424972
- [57] validation\_0-error:0.214328 validation\_0-loglos s:0.445464 validation\_1-error:0.187181 validation\_1-logloss:0.423904
- [58] validation\_0-error:0.213781 validation\_0-loglos s:0.444318 validation\_1-error:0.186897 validation\_1-logloss:0.423052
- [59] validation\_0-error:0.212729 validation\_0-loglos s:0.44329 validation\_1-error:0.186614 validation\_1-logloss:0.422121
- [60] validation\_0-error:0.212014 validation\_0-loglos s:0.44236 validation\_1-error:0.185763 validation\_1-logloss:0.42136
- [61] validation\_0-error:0.211173 validation\_0-loglos s:0.441376 validation\_1-error:0.186047 validation\_1-logloss:0.42049
- [62] validation\_0-error:0.210331 validation\_0-loglos s:0.440434 validation\_1-error:0.184912 validation\_1-logloss:0.420027
- [63] validation\_0-error:0.209953 validation\_0-loglos s:0.439486 validation\_1-error:0.184061 validation\_1-logloss:0.418932
- [64] validation\_0-error:0.209027 validation\_0-loglos s:0.438487 validation\_1-error:0.18236 validation\_1-logloss:0.41805
- [65] validation\_0-error:0.207934 validation\_0-loglos s:0.437454 validation\_1-error:0.18236 validation\_1-logloss:0.417274
- [66] validation\_0-error:0.206714 validation\_0-loglos s:0.436563 validation\_1-error:0.181225 validation\_1-logloss:0.416644
- [67] validation\_0-error:0.205452 validation\_0-loglos
  s:0.435496 validation\_1-error:0.180374 validation\_1logloss:0.416013
- [68] validation\_0-error:0.204989 validation\_0-loglos s:0.434656 validation\_1-error:0.179524 validation\_1-logloss:0.415396

- [69] validation\_0-error:0.204022 validation\_0-loglos s:0.433801 validation\_1-error:0.178389 validation\_1-logloss:0.414599
- [70] validation\_0-error:0.203306 validation\_0-loglos s:0.432938 validation\_1-error:0.177822 validation\_1-logloss:0.413826
- [71] validation\_0-error:0.202255 validation\_0-loglos s:0.432043 validation\_1-error:0.177255 validation\_1-logloss:0.413192
- [72] validation\_0-error:0.20154 validation\_0-loglos s:0.431228 validation\_1-error:0.177255 validation\_1-logloss:0.412808
- [73] validation\_0-error:0.200993 validation\_0-loglos s:0.43043 validation\_1-error:0.175837 validation\_1-logloss:0.411985
- [74] validation\_0-error:0.199983 validation\_0-loglos s:0.429653 validation\_1-error:0.17612 validation\_1-logloss:0.411566
- [75] validation\_0-error:0.199268 validation\_0-loglos s:0.428745 validation\_1-error:0.174419 validation\_1-logloss:0.410763
- [76] validation\_0-error:0.198511 validation\_0-loglos s:0.427938 validation\_1-error:0.17215 validation\_1-logloss:0.410224
- [77] validation\_0-error:0.198258 validation\_0-loglos s:0.42707 validation\_1-error:0.173284 validation\_1-logloss:0.409439
- [78] validation\_0-error:0.197627 validation\_0-loglos s:0.426187 validation\_1-error:0.171866 validation\_1-logloss:0.408704
- [79] validation\_0-error:0.197123 validation\_0-loglos s:0.425363 validation\_1-error:0.17215 validation\_1-logloss:0.40815
- [80] validation\_0-error:0.195945 validation\_0-loglos s:0.424473 validation\_1-error:0.171299 validation\_1-logloss:0.407658
- [81] validation\_0-error:0.195903 validation\_0-loglos s:0.423696 validation\_1-error:0.17215 validation\_1-logloss:0.40715
- [82] validation\_0-error:0.195019 validation\_0-loglos s:0.422975 validation\_1-error:0.171299 validation\_1-logloss:0.407032

- [83] validation\_0-error:0.194388 validation\_0-loglos s:0.42224 validation\_1-error:0.170448 validation\_1-logloss:0.406562
- [84] validation\_0-error:0.194094 validation\_0-loglos s:0.421504 validation\_1-error:0.170732 validation\_1-logloss:0.405907
- [85] validation\_0-error:0.194262 validation\_0-loglos s:0.420795 validation\_1-error:0.170164 validation\_1-logloss:0.405479
- [86] validation\_0-error:0.192874 validation\_0-loglos s:0.420074 validation\_1-error:0.16903 validation\_1-logloss:0.404969
- [87] validation\_0-error:0.192411 validation\_0-loglos s:0.419275 validation\_1-error:0.16903 validation\_1-logloss:0.404241
- [88] validation\_0-error:0.191696 validation\_0-loglos s:0.418562 validation\_1-error:0.169314 validation\_1-logloss:0.403983
- [89] validation\_0-error:0.190729 validation\_0-loglos s:0.417787 validation\_1-error:0.168179 validation\_1-logloss:0.403475
- [90] validation\_0-error:0.189971 validation\_0-loglos s:0.417031 validation\_1-error:0.167328 validation\_1-logloss:0.402848
- [91] validation\_0-error:0.189172 validation\_0-loglos s:0.416271 validation\_1-error:0.166478 validation\_1-logloss:0.402121
- [92] validation\_0-error:0.188751 validation\_0-loglos s:0.415488 validation\_1-error:0.165343 validation\_1-logloss:0.401536
- [93] validation\_0-error:0.188078 validation\_0-loglos s:0.414797 validation\_1-error:0.163925 validation\_1-logloss:0.401132
- [94] validation\_0-error:0.187784 validation\_0-loglos s:0.41406 validation\_1-error:0.164492 validation\_1-logloss:0.400804
- [95] validation\_0-error:0.187279 validation\_0-loglos s:0.413435 validation\_1-error:0.164209 validation\_1-logloss:0.40041
- [96] validation\_0-error:0.187027 validation\_0-loglos s:0.412718 validation\_1-error:0.16506 validation\_1-logloss:0.399905

- [97] validation\_0-error:0.18627 validation\_0-loglos s:0.41204 validation\_1-error:0.164776 validation\_1-logloss:0.399431
- [98] validation\_0-error:0.185681 validation\_0-loglos s:0.411264 validation\_1-error:0.163925 validation\_1-logloss:0.398909
- [99] validation\_0-error:0.185092 validation\_0-loglos s:0.41064 validation\_1-error:0.162791 validation\_1-logloss:0.398402
- [100] validation\_0-error:0.184923 validation\_0-loglos s:0.41005 validation\_1-error:0.161656 validation\_1-logloss:0.398052
- [101] validation\_0-error:0.184124 validation\_0-loglos s:0.409471 validation\_1-error:0.160805 validation\_1-logloss:0.397532
- [102] validation\_0-error:0.183956 validation\_0-loglos s:0.408703 validation\_1-error:0.160805 validation\_1-logloss:0.396679
- [103] validation\_0-error:0.182862 validation\_0-loglos s:0.407967 validation\_1-error:0.160522 validation\_1-logloss:0.396141
- [104] validation\_0-error:0.182063 validation\_0-loglos s:0.407393 validation\_1-error:0.159955 validation\_1-logloss:0.395765
- [105] validation\_0-error:0.181474 validation\_0-loglos s:0.406681 validation\_1-error:0.159671 validation\_1-logloss:0.395093
- [106] validation\_0-error:0.18118 validation\_0-loglos s:0.405974 validation\_1-error:0.159104 validation\_1-logloss:0.394423
- [107] validation\_0-error:0.181095 validation\_0-loglos s:0.40536 validation\_1-error:0.159955 validation\_1-logloss:0.39439
- [108] validation\_0-error:0.180717 validation\_0-loglos s:0.404769 validation\_1-error:0.158537 validation\_1-logloss:0.394189
- [109] validation\_0-error:0.180549 validation\_0-loglos s:0.4042 validation\_1-error:0.159104 validation\_1-logloss:0.393687
- [110] validation\_0-error:0.17996 validation\_0-loglos s:0.40358 validation\_1-error:0.159387 validation\_1-logloss:0.393308

- [111] validation\_0-error:0.179875 validation\_0-loglos s:0.402916 validation\_1-error:0.159104 validation\_1-logloss:0.392753
- [112] validation\_0-error:0.179287 validation\_0-loglos s:0.402284 validation\_1-error:0.157119 validation\_1-logloss:0.392448
- [113] validation\_0-error:0.179118 validation\_0-loglos s:0.401618 validation\_1-error:0.157969 validation\_1-logloss:0.391964
- [114] validation\_0-error:0.178403 validation\_0-loglos s:0.400997 validation\_1-error:0.158253 validation\_1-logloss:0.391732
- [115] validation\_0-error:0.178361 validation\_0-loglos
  s:0.400361 validation\_1-error:0.157119 validation\_1logloss:0.391313
- [116] validation\_0-error:0.177814 validation\_0-loglos
  s:0.399795 validation\_1-error:0.156551 validation\_1logloss:0.390931
- [117] validation\_0-error:0.176889 validation\_0-loglos s:0.39924 validation\_1-error:0.156835 validation\_1-logloss:0.390563
- [118] validation\_0-error:0.176636 validation\_0-loglos
  s:0.398601 validation\_1-error:0.157402 validation\_1logloss:0.390115
- [119] validation\_0-error:0.175879 validation\_0-loglos
  s:0.39809 validation\_1-error:0.157402 validation\_1logloss:0.38998
- [120] validation\_0-error:0.175711 validation\_0-loglos s:0.397472 validation\_1-error:0.157119 validation\_1-logloss:0.389596
- [121] validation\_0-error:0.175669 validation\_0-loglos s:0.39687 validation\_1-error:0.156268 validation\_1-logloss:0.389225
- [122] validation\_0-error:0.174785 validation\_0-loglos s:0.396383 validation\_1-error:0.156551 validation\_1-logloss:0.388671
- [123] validation\_0-error:0.174954 validation\_0-loglos s:0.395746 validation\_1-error:0.156268 validation\_1-logloss:0.388237
- [124] validation\_0-error:0.173566 validation\_0-loglos s:0.395148 validation\_1-error:0.155984 validation\_1-logloss:0.387772

- [125] validation\_0-error:0.173271 validation\_0-loglos s:0.394519 validation\_1-error:0.155417 validation\_1-logloss:0.387222
- [126] validation\_0-error:0.173229 validation\_0-loglos s:0.393978 validation\_1-error:0.155417 validation\_1-logloss:0.386906
- [127] validation\_0-error:0.172892 validation\_0-loglos s:0.393525 validation\_1-error:0.155133 validation\_1-logloss:0.386335
- [128] validation\_0-error:0.172598 validation\_0-loglos s:0.392911 validation\_1-error:0.153148 validation\_1-logloss:0.385729
- [129] validation\_0-error:0.171925 validation\_0-loglos s:0.392382 validation\_1-error:0.153432 validation\_1-logloss:0.385527
- [130] validation\_0-error:0.171546 validation\_0-loglos s:0.391873 validation\_1-error:0.153148 validation\_1-logloss:0.385129
- [131] validation\_0-error:0.170663 validation\_0-loglos s:0.391322 validation\_1-error:0.152297 validation\_1-logloss:0.38458
- [132] validation\_0-error:0.170284 validation\_0-loglos s:0.390793 validation\_1-error:0.152581 validation\_1-logloss:0.38414
- [133] validation\_0-error:0.169695 validation\_0-loglos s:0.390259 validation\_1-error:0.153432 validation\_1-logloss:0.383599
- [134] validation\_0-error:0.169275 validation\_0-loglos s:0.389753 validation\_1-error:0.152864 validation\_1-logloss:0.383391
- [135] validation\_0-error:0.169064 validation\_0-loglos s:0.38927 validation\_1-error:0.152581 validation\_1-logloss:0.382937
- [136] validation\_0-error:0.168307 validation\_0-loglos s:0.388676 validation\_1-error:0.150879 validation\_1-logloss:0.382511
- [137] validation\_0-error:0.16776 validation\_0-loglos
  s:0.388171 validation\_1-error:0.152014 validation\_1logloss:0.382182
- [138] validation\_0-error:0.167214 validation\_0-loglos s:0.387554 validation\_1-error:0.152014 validation\_1-logloss:0.381501

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[139] validation_0-error:0.16734 validation_0-loglos s:0.386985 validation_1-error:0.151163 validation_1-logloss:0.381016
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- [140] validation\_0-error:0.167298 validation\_0-loglos s:0.386502 validation\_1-error:0.151163 validation\_1-logloss:0.380593
- [141] validation\_0-error:0.166667 validation\_0-loglos s:0.386017 validation\_1-error:0.151446 validation\_1-logloss:0.380274
- [142] validation\_0-error:0.165952 validation\_0-loglos s:0.385407 validation\_1-error:0.150596 validation\_1-logloss:0.379843
- [143] validation\_0-error:0.165783 validation\_0-loglos s:0.38489 validation\_1-error:0.149178 validation\_1-logloss:0.379261
- [144] validation\_0-error:0.165363 validation\_0-loglos s:0.384352 validation\_1-error:0.149178 validation\_1-logloss:0.378897
- [145] validation\_0-error:0.165152 validation\_0-loglos s:0.383751 validation\_1-error:0.149178 validation\_1-logloss:0.378703
- [146] validation\_0-error:0.16469 validation\_0-loglos s:0.383259 validation\_1-error:0.14861 validation\_1-logloss:0.378381
- [147] validation\_0-error:0.164059 validation\_0-loglos s:0.382719 validation\_1-error:0.14861 validation\_1-logloss:0.378119
- [148] validation\_0-error:0.163301 validation\_0-loglos s:0.382248 validation\_1-error:0.147476 validation\_1-logloss:0.377814
- [149] validation\_0-error:0.163091 validation\_0-loglos s:0.381773 validation\_1-error:0.146625 validation\_1-logloss:0.377539
- [150] validation\_0-error:0.162376 validation\_0-loglos s:0.381186 validation\_1-error:0.147192 validation\_1-logloss:0.377004
- [151] validation\_0-error:0.161913 validation\_0-loglos s:0.380789 validation\_1-error:0.147192 validation\_1-logloss:0.376659
- [152] validation\_0-error:0.161913 validation\_0-loglos
  s:0.380316 validation\_1-error:0.146909 validation\_1logloss:0.376162

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[153] validation_0-error:0.161619 validation_0-loglos
s:0.379878 validation_1-error:0.147192 validation_1-
logloss:0.375821
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- [154] validation\_0-error:0.161408 validation\_0-loglos s:0.379417 validation\_1-error:0.146058 validation\_1-logloss:0.37579
- [155] validation\_0-error:0.160357 validation\_0-loglos s:0.378703 validation\_1-error:0.146058 validation\_1-logloss:0.375078
- [156] validation\_0-error:0.160819 validation\_0-loglos s:0.378215 validation\_1-error:0.145207 validation\_1-logloss:0.374829
- [157] validation\_0-error:0.160525 validation\_0-loglos
  s:0.377716 validation\_1-error:0.144356 validation\_1logloss:0.374671
- [158] validation\_0-error:0.159726 validation\_0-loglos s:0.37718 validation\_1-error:0.143222 validation\_1-logloss:0.374152
- [159] validation\_0-error:0.159305 validation\_0-loglos s:0.376651 validation\_1-error:0.143789 validation\_1-logloss:0.373828
- [160] validation\_0-error:0.159389 validation\_0-loglos s:0.376129 validation\_1-error:0.143789 validation\_1-logloss:0.373325
- [161] validation\_0-error:0.1588 validation\_0-logloss:0.37
  5646 validation\_1-error:0.144073 validation\_1-loglos
  s:0.373123
- [162] validation\_0-error:0.158043 validation\_0-loglos s:0.37498 validation\_1-error:0.144073 validation\_1-logloss:0.372886
- [163] validation\_0-error:0.158548 validation\_0-loglos s:0.374468 validation\_1-error:0.143505 validation\_1-logloss:0.372493
- [164] validation\_0-error:0.158043 validation\_0-loglos s:0.373987 validation\_1-error:0.142655 validation\_1-logloss:0.372308
- [165] validation\_0-error:0.158001 validation\_0-loglos
  s:0.373571 validation\_1-error:0.142371 validation\_1logloss:0.371697
- [166] validation\_0-error:0.15737 validation\_0-loglos
  s:0.373013 validation\_1-error:0.142938 validation\_1logloss:0.371107

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[167] validation_0-error:0.156697 validation_0-loglos
s:0.372556 validation_1-error:0.143222 validation_1-
logloss:0.37078
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- [168] validation\_0-error:0.15636 validation\_0-loglos s:0.372108 validation\_1-error:0.144073 validation\_1-logloss:0.370777
- [169] validation\_0-error:0.156024 validation\_0-loglos s:0.371666 validation\_1-error:0.144073 validation\_1-logloss:0.370678
- [170] validation\_0-error:0.155814 validation\_0-loglos s:0.371134 validation\_1-error:0.144073 validation\_1-logloss:0.370262
- [171] validation\_0-error:0.155393 validation\_0-loglos s:0.370595 validation\_1-error:0.143505 validation\_1-logloss:0.369961
- [172] validation\_0-error:0.155225 validation\_0-loglos s:0.37016 validation\_1-error:0.143505 validation\_1-logloss:0.369462
- [173] validation\_0-error:0.154846 validation\_0-loglos s:0.369645 validation\_1-error:0.142655 validation\_1-logloss:0.369144
- [174] validation\_0-error:0.154215 validation\_0-loglos s:0.369069 validation\_1-error:0.143222 validation\_1-logloss:0.368901
- [175] validation\_0-error:0.154047 validation\_0-loglos s:0.368683 validation\_1-error:0.143789 validation\_1-logloss:0.368847
- [176] validation\_0-error:0.153879 validation\_0-loglos s:0.368249 validation\_1-error:0.144356 validation\_1-logloss:0.368606
- [177] validation\_0-error:0.153458 validation\_0-loglos s:0.367807 validation\_1-error:0.143505 validation\_1-logloss:0.36846
- [178] validation\_0-error:0.1535 validation\_0-logloss:0.36
  738 validation\_1-error:0.143789 validation\_1-loglos
  s:0.36817
- [179] validation\_0-error:0.15329 validation\_0-loglos s:0.366877 validation\_1-error:0.142938 validation\_1-logloss:0.367653
- [180] validation\_0-error:0.153121 validation\_0-loglos s:0.366461 validation\_1-error:0.142655 validation\_1-logloss:0.367185

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[181] validation_0-error:0.152617 validation_0-loglos s:0.366004 validation_1-error:0.142371 validation_1-logloss:0.367001
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- [182] validation\_0-error:0.152448 validation\_0-loglos s:0.365592 validation\_1-error:0.142087 validation\_1-logloss:0.366414
- [183] validation\_0-error:0.15228 validation\_0-loglos s:0.365127 validation\_1-error:0.142938 validation\_1-logloss:0.366161
- [184] validation\_0-error:0.151817 validation\_0-loglos s:0.364784 validation\_1-error:0.143222 validation\_1-logloss:0.366028
- [185] validation\_0-error:0.151733 validation\_0-loglos s:0.364363 validation\_1-error:0.142371 validation\_1-logloss:0.365746
- [186] validation\_0-error:0.151523 validation\_0-loglos s:0.363973 validation\_1-error:0.142371 validation\_1-logloss:0.365611
- [187] validation\_0-error:0.15106 validation\_0-loglos s:0.363379 validation\_1-error:0.141237 validation\_1-logloss:0.365008
- [188] validation\_0-error:0.150513 validation\_0-loglos s:0.362959 validation\_1-error:0.14152 validation\_1-logloss:0.364619
- [189] validation\_0-error:0.150261 validation\_0-loglos s:0.362598 validation\_1-error:0.14152 validation\_1-logloss:0.364486
- [190] validation\_0-error:0.149798 validation\_0-loglos s:0.362101 validation\_1-error:0.142087 validation\_1-logloss:0.364248
- [191] validation\_0-error:0.148831 validation\_0-loglos s:0.36159 validation\_1-error:0.14152 validation\_1-logloss:0.363867
- [192] validation\_0-error:0.148873 validation\_0-loglos s:0.361197 validation\_1-error:0.142087 validation\_1-logloss:0.363751
- [193] validation\_0-error:0.148368 validation\_0-loglos s:0.360712 validation\_1-error:0.141804 validation\_1-logloss:0.363193
- [194] validation\_0-error:0.148284 validation\_0-loglos s:0.360328 validation\_1-error:0.141237 validation\_1-logloss:0.362942

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[195] validation_0-error:0.147989 validation_0-loglos s:0.359901 validation_1-error:0.14152 validation_1-logloss:0.362747
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- [196] validation\_0-error:0.147695 validation\_0-loglos s:0.359554 validation\_1-error:0.141237 validation\_1-logloss:0.362523
- [197] validation\_0-error:0.147358 validation\_0-loglos s:0.359236 validation\_1-error:0.141237 validation\_1-logloss:0.362371
- [198] validation\_0-error:0.147358 validation\_0-loglos s:0.358857 validation\_1-error:0.141237 validation\_1-logloss:0.362136
- [199] validation\_0-error:0.147148 validation\_0-loglos
  s:0.358432 validation\_1-error:0.140669 validation\_1logloss:0.361966
- [200] validation\_0-error:0.146727 validation\_0-loglos s:0.358094 validation\_1-error:0.14152 validation\_1-logloss:0.361837
- [201] validation\_0-error:0.146138 validation\_0-loglos s:0.357609 validation\_1-error:0.140953 validation\_1-logloss:0.36141
- [202] validation\_0-error:0.14597 validation\_0-loglos s:0.357214 validation\_1-error:0.140669 validation\_1-logloss:0.3611
- [203] validation\_0-error:0.145886 validation\_0-loglos s:0.35682 validation\_1-error:0.140386 validation\_1-logloss:0.360951
- [204] validation\_0-error:0.145676 validation\_0-loglos s:0.356424 validation\_1-error:0.140669 validation\_1-logloss:0.360759
- [205] validation\_0-error:0.145255 validation\_0-loglos s:0.355933 validation\_1-error:0.140386 validation\_1-logloss:0.360578
- [206] validation\_0-error:0.145045 validation\_0-loglos s:0.355592 validation\_1-error:0.140953 validation\_1-logloss:0.360522
- [207] validation\_0-error:0.144792 validation\_0-loglos s:0.35522 validation\_1-error:0.14152 validation\_1-logloss:0.360273
- [208] validation\_0-error:0.14475 validation\_0-loglos s:0.354862 validation\_1-error:0.140386 validation\_1-logloss:0.360015

- [209] validation\_0-error:0.144414 validation\_0-loglos s:0.354432 validation\_1-error:0.138684 validation\_1-logloss:0.35965
- [210] validation\_0-error:0.144372 validation\_0-loglos s:0.354016 validation\_1-error:0.13755 validation\_1-logloss:0.35944
- [211] validation\_0-error:0.144456 validation\_0-loglos s:0.353623 validation\_1-error:0.138117 validation\_1-logloss:0.359028
- [212] validation\_0-error:0.143909 validation\_0-loglos s:0.353141 validation\_1-error:0.1384 validation\_1-loglos s:0.358779
- [213] validation\_0-error:0.143446 validation\_0-loglos s:0.352732 validation\_1-error:0.137833 validation\_1-logloss:0.358627
- [214] validation\_0-error:0.143025 validation\_0-loglos s:0.352342 validation\_1-error:0.13755 validation\_1-logloss:0.358322
- [215] validation\_0-error:0.142689 validation\_0-loglos s:0.35193 validation\_1-error:0.139251 validation\_1-logloss:0.358062
- [216] validation\_0-error:0.142689 validation\_0-loglos s:0.351474 validation\_1-error:0.138684 validation\_1-logloss:0.357791
- [217] validation\_0-error:0.14231 validation\_0-loglos s:0.351128 validation\_1-error:0.1384 validation\_1-loglos s:0.35777
- [218] validation\_0-error:0.142563 validation\_0-loglos s:0.350758 validation\_1-error:0.137833 validation\_1-logloss:0.35749
- [219] validation\_0-error:0.142352 validation\_0-loglos s:0.350384 validation\_1-error:0.13755 validation\_1-logloss:0.357308
- [220] validation\_0-error:0.14189 validation\_0-loglos s:0.349919 validation\_1-error:0.137266 validation\_1-logloss:0.357091
- [221] validation\_0-error:0.141385 validation\_0-loglos s:0.349487 validation\_1-error:0.138684 validation\_1-logloss:0.356845
- [222] validation\_0-error:0.141385 validation\_0-loglos s:0.349107 validation\_1-error:0.138117 validation\_1-logloss:0.356655

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[223] validation_0-error:0.140964 validation_0-loglos s:0.348753 validation_1-error:0.136982 validation_1-logloss:0.3564
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- [224] validation\_0-error:0.14067 validation\_0-loglos s:0.348362 validation\_1-error:0.137266 validation\_1-logloss:0.356328
- [225] validation\_0-error:0.140375 validation\_0-loglos s:0.348015 validation\_1-error:0.13755 validation\_1-logloss:0.356194
- [226] validation\_0-error:0.140165 validation\_0-loglos s:0.347605 validation\_1-error:0.136982 validation\_1-logloss:0.355967
- [227] validation\_0-error:0.140501 validation\_0-loglos s:0.347169 validation\_1-error:0.13755 validation\_1-logloss:0.355727
- [228] validation\_0-error:0.140333 validation\_0-loglos s:0.34675 validation\_1-error:0.137266 validation\_1-logloss:0.355506
- [229] validation\_0-error:0.13966 validation\_0-loglos s:0.346315 validation\_1-error:0.135564 validation\_1-logloss:0.355131
- [230] validation\_0-error:0.138735 validation\_0-loglos s:0.345838 validation\_1-error:0.137266 validation\_1-logloss:0.354946
- [231] validation\_0-error:0.139155 validation\_0-loglos s:0.345398 validation\_1-error:0.135848 validation\_1-logloss:0.354679
- [232] validation\_0-error:0.138819 validation\_0-loglos s:0.345072 validation\_1-error:0.135564 validation\_1-logloss:0.354301
- [233] validation\_0-error:0.138945 validation\_0-loglos s:0.344737 validation\_1-error:0.134714 validation\_1-logloss:0.354144
- [234] validation\_0-error:0.13844 validation\_0-loglos s:0.34433 validation\_1-error:0.134997 validation\_1-logloss:0.353923
- [235] validation\_0-error:0.138062 validation\_0-loglos s:0.343961 validation\_1-error:0.135564 validation\_1-logloss:0.35364
- [236] validation\_0-error:0.137809 validation\_0-loglos s:0.343616 validation\_1-error:0.134997 validation\_1-logloss:0.35336

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[237] validation_0-error:0.13722 validation_0-loglos s:0.343263 validation_1-error:0.135848 validation_1-logloss:0.353076
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- [238] validation\_0-error:0.137304 validation\_0-loglos s:0.342916 validation\_1-error:0.136699 validation\_1-logloss:0.352754
- [239] validation\_0-error:0.137052 validation\_0-loglos s:0.342541 validation\_1-error:0.136132 validation\_1-logloss:0.352632
- [240] validation\_0-error:0.137262 validation\_0-loglos s:0.342233 validation\_1-error:0.135564 validation\_1-logloss:0.352481
- [241] validation\_0-error:0.136758 validation\_0-loglos s:0.341817 validation\_1-error:0.135564 validation\_1-logloss:0.352184
- [242] validation\_0-error:0.136842 validation\_0-loglos s:0.34147 validation\_1-error:0.136982 validation\_1-logloss:0.352006
- [243] validation\_0-error:0.136042 validation\_0-loglos s:0.341032 validation\_1-error:0.135848 validation\_1-logloss:0.351743
- [244] validation\_0-error:0.135453 validation\_0-loglos s:0.340632 validation\_1-error:0.134714 validation\_1-logloss:0.351272
- [245] validation\_0-error:0.135622 validation\_0-loglos s:0.340245 validation\_1-error:0.134997 validation\_1-logloss:0.351055
- [246] validation\_0-error:0.135285 validation\_0-loglos s:0.33988 validation\_1-error:0.135281 validation\_1-logloss:0.350717
- [247] validation\_0-error:0.13558 validation\_0-loglos s:0.339497 validation\_1-error:0.135848 validation\_1-logloss:0.350558
- [248] validation\_0-error:0.135369 validation\_0-loglos s:0.339122 validation\_1-error:0.135564 validation\_1-logloss:0.350314
- [249] validation\_0-error:0.134949 validation\_0-loglos s:0.338774 validation\_1-error:0.135848 validation\_1-logloss:0.349991
- [250] validation\_0-error:0.134612 validation\_0-loglos s:0.338456 validation\_1-error:0.135564 validation\_1-logloss:0.349633

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[251] validation_0-error:0.134486 validation_0-loglos s:0.338071 validation_1-error:0.135848 validation_1-logloss:0.349008
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- [252] validation\_0-error:0.134149 validation\_0-loglos s:0.337722 validation\_1-error:0.134714 validation\_1-logloss:0.348805
- [253] validation\_0-error:0.134191 validation\_0-loglos s:0.337389 validation\_1-error:0.13443 validation\_1-logloss:0.348598
- [254] validation\_0-error:0.133855 validation\_0-loglos s:0.337053 validation\_1-error:0.134714 validation\_1-logloss:0.348596
- [255] validation\_0-error:0.133392 validation\_0-loglos s:0.33671 validation\_1-error:0.134714 validation\_1-logloss:0.348292
- [256] validation\_0-error:0.132972 validation\_0-loglos s:0.336376 validation\_1-error:0.135564 validation\_1-logloss:0.348404
- [257] validation\_0-error:0.132803 validation\_0-loglos s:0.336029 validation\_1-error:0.135848 validation\_1-logloss:0.348303
- [258] validation\_0-error:0.132214 validation\_0-loglos s:0.335668 validation\_1-error:0.135281 validation\_1-logloss:0.348056
- [259] validation\_0-error:0.132088 validation\_0-loglos s:0.335365 validation\_1-error:0.134997 validation\_1-logloss:0.347797
- [260] validation\_0-error:0.13213 validation\_0-loglos s:0.335009 validation\_1-error:0.133012 validation\_1-logloss:0.347488
- [261] validation\_0-error:0.131962 validation\_0-loglos s:0.334652 validation\_1-error:0.133012 validation\_1-logloss:0.347371
- [262] validation\_0-error:0.131794 validation\_0-loglos s:0.334324 validation\_1-error:0.132728 validation\_1-logloss:0.347277
- [263] validation\_0-error:0.131331 validation\_0-loglos s:0.334033 validation\_1-error:0.132445 validation\_1-logloss:0.347108
- [264] validation\_0-error:0.131247 validation\_0-loglos s:0.333707 validation\_1-error:0.132728 validation\_1-logloss:0.347195

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[265] validation_0-error:0.131205 validation_0-loglos s:0.333332 validation_1-error:0.132445 validation_1-logloss:0.346973
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- [266] validation\_0-error:0.131079 validation\_0-loglos s:0.333015 validation\_1-error:0.133296 validation\_1-logloss:0.346806
- [267] validation\_0-error:0.130195 validation\_0-loglos s:0.332703 validation\_1-error:0.134146 validation\_1-logloss:0.34661
- [268] validation\_0-error:0.130195 validation\_0-loglos s:0.332381 validation\_1-error:0.134146 validation\_1-logloss:0.346294
- [269] validation\_0-error:0.130027 validation\_0-loglos s:0.33205 validation\_1-error:0.133579 validation\_1-logloss:0.345961
- [270] validation\_0-error:0.130153 validation\_0-loglos s:0.331713 validation\_1-error:0.133012 validation\_1-logloss:0.345822
- [271] validation\_0-error:0.12948 validation\_0-loglos s:0.331407 validation\_1-error:0.132728 validation\_1-logloss:0.345735
- [272] validation\_0-error:0.129312 validation\_0-loglos s:0.331136 validation\_1-error:0.132445 validation\_1-logloss:0.345622
- [273] validation\_0-error:0.129354 validation\_0-loglos s:0.330882 validation\_1-error:0.132728 validation\_1-logloss:0.345404
- [274] validation\_0-error:0.128891 validation\_0-loglos s:0.330603 validation\_1-error:0.132445 validation\_1-logloss:0.345181
- [275] validation\_0-error:0.12826 validation\_0-loglos s:0.33026 validation\_1-error:0.131877 validation\_1-logloss:0.344977
- [276] validation\_0-error:0.128218 validation\_0-loglos s:0.329996 validation\_1-error:0.13131 validation\_1-logloss:0.344827
- [277] validation\_0-error:0.127924 validation\_0-loglos s:0.329707 validation\_1-error:0.131594 validation\_1-logloss:0.344523
- [278] validation\_0-error:0.127713 validation\_0-loglos s:0.329379 validation\_1-error:0.132161 validation\_1-logloss:0.344388

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[279] validation_0-error:0.127251 validation_0-loglos s:0.329089 validation_1-error:0.132445 validation_1-logloss:0.34435
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- [280] validation\_0-error:0.12683 validation\_0-loglos s:0.328732 validation\_1-error:0.132445 validation\_1-logloss:0.34421
- [281] validation\_0-error:0.126956 validation\_0-loglos s:0.328415 validation\_1-error:0.133012 validation\_1-logloss:0.344019
- [282] validation\_0-error:0.126914 validation\_0-loglos s:0.328016 validation\_1-error:0.132161 validation\_1-logloss:0.343724
- [283] validation\_0-error:0.126662 validation\_0-loglos s:0.327686 validation\_1-error:0.132161 validation\_1-logloss:0.343528
- [284] validation\_0-error:0.126325 validation\_0-loglos s:0.327377 validation\_1-error:0.132445 validation\_1-logloss:0.343399
- [285] validation\_0-error:0.126451 validation\_0-loglos s:0.32709 validation\_1-error:0.132161 validation\_1-logloss:0.343315
- [286] validation\_0-error:0.126241 validation\_0-loglos s:0.326812 validation\_1-error:0.132728 validation\_1-logloss:0.343103
- [287] validation\_0-error:0.126073 validation\_0-loglos s:0.326548 validation\_1-error:0.132728 validation\_1-logloss:0.342875
- [288] validation\_0-error:0.126283 validation\_0-loglos s:0.326233 validation\_1-error:0.132728 validation\_1-logloss:0.342811
- [289] validation\_0-error:0.126031 validation\_0-loglos s:0.325822 validation\_1-error:0.132728 validation\_1-logloss:0.342491
- [290] validation\_0-error:0.12561 validation\_0-loglos s:0.325476 validation\_1-error:0.132161 validation\_1-logloss:0.342043
- [291] validation\_0-error:0.125231 validation\_0-loglos s:0.32523 validation\_1-error:0.132161 validation\_1-logloss:0.341832
- [292] validation\_0-error:0.124727 validation\_0-loglos s:0.324885 validation\_1-error:0.131877 validation\_1-logloss:0.3414

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[293] validation_0-error:0.1246 validation_0-logloss:0.32
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- 4587 validation\_1-error:0.131877 validation\_1-loglos s:0.341204
- [294] validation\_0-error:0.124432 validation\_0-loglos s:0.324313 validation\_1-error:0.131877 validation\_1-
- logloss:0.341063
- [295] validation\_0-error:0.124348 validation\_0-loglos s:0.324039 validation 1-error:0.131594 validation 1-
- logloss:0.340893
- [296] validation\_0-error:0.124011 validation\_0-loglos
- s:0.323724 validation\_1-error:0.131594 validation\_1-logloss:0.340843
- [297] validation\_0-error:0.123759 validation\_0-loglos
- s:0.323467 validation\_1-error:0.13131 validation\_1-logloss:0.340656
- [298] validation 0-error:0.124011 validation 0-loglos
- s:0.323156 validation\_1-error:0.131594 validation\_1-logloss:0.340327
- [299] validation\_0-error:0.123801 validation\_0-loglos
- s:0.322849 validation\_1-error:0.132728 validation\_1-logloss:0.340023
- [300] validation 0-error:0.123885 validation 0-loglos
- s:0.32258 validation\_1-error:0.132161 validation\_1-logloss:0.339733
- [301] validation 0-error:0.123465 validation 0-loglos
- s:0.322285 validation\_1-error:0.133296 validation\_1-logloss:0.339567
- [302] validation 0-error:0.12317 validation 0-loglos
- s:0.322007 validation\_1-error:0.132445 validation\_1-
- logloss:0.339333
- [303] validation 0-error:0.122918 validation 0-loglos
- s:0.321719 validation\_1-error:0.132161 validation\_1-logloss:0.33912
- [304] validation 0-error:0.122665 validation 0-loglos
- s:0.321441 validation\_1-error:0.132445 validation\_1-logloss:0.339107
- [305] validation 0-error:0.122749 validation 0-loglos
- s:0.32114 validation\_1-error:0.133012 validation\_1-
- logloss:0.338932
- [306] validation 0-error:0.122834 validation 0-loglos
- s:0.32083 validation\_1-error:0.133863 validation\_1-
- logloss:0.338746

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[307] validation_0-error:0.12296 validation_0-loglos s:0.320516 validation_1-error:0.133012 validation_1-logloss:0.33899
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- [308] validation\_0-error:0.122118 validation\_0-loglos s:0.320145 validation\_1-error:0.133012 validation\_1-logloss:0.338562
- [309] validation\_0-error:0.121782 validation\_0-loglos s:0.319849 validation\_1-error:0.132161 validation\_1-logloss:0.338494
- [310] validation\_0-error:0.121908 validation\_0-loglos s:0.319528 validation\_1-error:0.132445 validation\_1-logloss:0.338252
- [311] validation\_0-error:0.121656 validation\_0-loglos s:0.319213 validation\_1-error:0.133296 validation\_1-logloss:0.338033
- [312] validation\_0-error:0.12153 validation\_0-loglos s:0.318959 validation\_1-error:0.132445 validation\_1-logloss:0.337841
- [313] validation\_0-error:0.120941 validation\_0-loglos s:0.318637 validation\_1-error:0.132445 validation\_1-logloss:0.337605
- [314] validation\_0-error:0.120604 validation\_0-loglos s:0.318342 validation\_1-error:0.132161 validation\_1-logloss:0.337427
- [315] validation\_0-error:0.120394 validation\_0-loglos s:0.318087 validation\_1-error:0.132161 validation\_1-logloss:0.337223
- [316] validation\_0-error:0.12031 validation\_0-loglos s:0.317831 validation\_1-error:0.133296 validation\_1-logloss:0.337064
- [317] validation\_0-error:0.120183 validation\_0-loglos s:0.317558 validation\_1-error:0.133863 validation\_1-logloss:0.336764
- [318] validation\_0-error:0.119889 validation\_0-loglos s:0.317231 validation\_1-error:0.133296 validation\_1-logloss:0.3365
- [319] validation\_0-error:0.119468 validation\_0-loglos s:0.316994 validation\_1-error:0.133296 validation\_1-logloss:0.336332
- [320] validation\_0-error:0.119721 validation\_0-loglos s:0.316715 validation\_1-error:0.133296 validation\_1-logloss:0.336128

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[321] validation_0-error:0.119721 validation_0-loglos s:0.316439 validation_1-error:0.132445 validation_1-logloss:0.336041
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- [322] validation\_0-error:0.119216 validation\_0-loglos s:0.316113 validation\_1-error:0.132445 validation\_1-logloss:0.335929
- [323] validation\_0-error:0.119637 validation\_0-loglos s:0.315832 validation\_1-error:0.132161 validation\_1-logloss:0.33566
- [324] validation\_0-error:0.119426 validation\_0-loglos s:0.315642 validation\_1-error:0.132445 validation\_1-logloss:0.335582
- [325] validation\_0-error:0.118669 validation\_0-loglos s:0.315338 validation\_1-error:0.133012 validation\_1-logloss:0.33555
- [326] validation\_0-error:0.119048 validation\_0-loglos s:0.315017 validation\_1-error:0.132728 validation\_1-logloss:0.335467
- [327] validation\_0-error:0.119048 validation\_0-loglos s:0.314811 validation\_1-error:0.133296 validation\_1-logloss:0.335321
- [328] validation\_0-error:0.118963 validation\_0-loglos s:0.314498 validation\_1-error:0.132445 validation\_1-logloss:0.335304
- [329] validation\_0-error:0.118837 validation\_0-loglos s:0.314293 validation\_1-error:0.132728 validation\_1-logloss:0.335199
- [330] validation\_0-error:0.11909 validation\_0-loglos s:0.314015 validation\_1-error:0.131594 validation\_1-logloss:0.335236
- [331] validation\_0-error:0.118879 validation\_0-loglos s:0.313778 validation\_1-error:0.132161 validation\_1-logloss:0.334957
- [332] validation\_0-error:0.118711 validation\_0-loglos s:0.313508 validation\_1-error:0.132161 validation\_1-logloss:0.334675
- [333] validation\_0-error:0.118332 validation\_0-loglos s:0.313232 validation\_1-error:0.131877 validation\_1-logloss:0.334599
- [334] validation\_0-error:0.11787 validation\_0-loglos s:0.312944 validation\_1-error:0.130459 validation\_1-logloss:0.334269

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[335] validation_0-error:0.117407 validation_0-loglos s:0.312687 validation_1-error:0.130176 validation_1-logloss:0.334064
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- [336] validation\_0-error:0.116944 validation\_0-loglos s:0.312411 validation\_1-error:0.129892 validation\_1-logloss:0.334005
- [337] validation\_0-error:0.117155 validation\_0-loglos s:0.312199 validation\_1-error:0.129609 validation\_1-logloss:0.333858
- [338] validation\_0-error:0.117113 validation\_0-loglos s:0.311947 validation\_1-error:0.129609 validation\_1-logloss:0.333806
- [339] validation\_0-error:0.116355 validation\_0-loglos s:0.311667 validation\_1-error:0.129325 validation\_1-logloss:0.333897
- [340] validation\_0-error:0.11665 validation\_0-loglos s:0.311479 validation\_1-error:0.129325 validation\_1-logloss:0.333788
- [341] validation\_0-error:0.116271 validation\_0-loglos s:0.311201 validation\_1-error:0.129325 validation\_1-logloss:0.333706
- [342] validation\_0-error:0.116229 validation\_0-loglos s:0.310935 validation\_1-error:0.128758 validation\_1-logloss:0.333625
- [343] validation\_0-error:0.116313 validation\_0-loglos s:0.310631 validation\_1-error:0.129325 validation\_1-logloss:0.333574
- [344] validation\_0-error:0.116187 validation\_0-loglos s:0.310349 validation\_1-error:0.128474 validation\_1-logloss:0.333528
- [345] validation\_0-error:0.116187 validation\_0-loglos s:0.310033 validation\_1-error:0.128474 validation\_1-logloss:0.333349
- [346] validation\_0-error:0.116187 validation\_0-loglos s:0.3098 validation\_1-error:0.128191 validation\_1-logloss:0.333147
- [347] validation\_0-error:0.11644 validation\_0-loglos s:0.309547 validation\_1-error:0.127907 validation\_1-logloss:0.333001
- [348] validation\_0-error:0.116145 validation\_0-loglos s:0.309239 validation\_1-error:0.128474 validation\_1-logloss:0.332668

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[349] validation_0-error:0.116019 validation_0-loglos s:0.308916 validation_1-error:0.128191 validation_1-logloss:0.332534
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- [350] validation\_0-error:0.11564 validation\_0-loglos s:0.308619 validation\_1-error:0.127907 validation\_1-logloss:0.332312
- [351] validation\_0-error:0.115809 validation\_0-loglos s:0.308347 validation\_1-error:0.127623 validation\_1-logloss:0.332148
- [352] validation\_0-error:0.115766 validation\_0-loglos s:0.308111 validation\_1-error:0.127623 validation\_1-logloss:0.331982
- [353] validation\_0-error:0.115514 validation\_0-loglos s:0.30784 validation\_1-error:0.127623 validation\_1-logloss:0.332074
- [354] validation\_0-error:0.115178 validation\_0-loglos s:0.307547 validation\_1-error:0.128191 validation\_1-logloss:0.331912
- [355] validation\_0-error:0.11522 validation\_0-loglos s:0.307322 validation\_1-error:0.127623 validation\_1-logloss:0.33175
- [356] validation\_0-error:0.11522 validation\_0-loglos s:0.307087 validation\_1-error:0.127623 validation\_1-logloss:0.331497
- [357] validation\_0-error:0.115135 validation\_0-loglos s:0.306822 validation\_1-error:0.127907 validation\_1-logloss:0.33126
- [358] validation\_0-error:0.115051 validation\_0-loglos s:0.306611 validation\_1-error:0.127623 validation\_1-logloss:0.331206
- [359] validation\_0-error:0.114504 validation\_0-loglos s:0.306334 validation\_1-error:0.127907 validation\_1-logloss:0.331024
- [360] validation\_0-error:0.114462 validation\_0-loglos s:0.30603 validation\_1-error:0.127907 validation\_1-logloss:0.330796
- [361] validation\_0-error:0.114631 validation\_0-loglos s:0.305792 validation\_1-error:0.128191 validation\_1-logloss:0.330615
- [362] validation\_0-error:0.114589 validation\_0-loglos s:0.305516 validation\_1-error:0.127907 validation\_1-logloss:0.330531

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[363] validation_0-error:0.114378 validation_0-loglos s:0.305225 validation_1-error:0.128191 validation_1-logloss:0.330291
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- [364] validation\_0-error:0.114126 validation\_0-loglos s:0.304939 validation\_1-error:0.128191 validation\_1-logloss:0.330086
- [365] validation\_0-error:0.113705 validation\_0-loglos s:0.304652 validation\_1-error:0.127623 validation\_1-logloss:0.329828
- [366] validation\_0-error:0.113747 validation\_0-loglos s:0.304355 validation\_1-error:0.12734 validation\_1-logloss:0.329612
- [367] validation\_0-error:0.113621 validation\_0-loglos s:0.304113 validation\_1-error:0.127623 validation\_1-logloss:0.329485
- [368] validation\_0-error:0.113411 validation\_0-loglos s:0.303897 validation\_1-error:0.12734 validation\_1-logloss:0.329265
- [369] validation\_0-error:0.113158 validation\_0-loglos s:0.303672 validation\_1-error:0.127056 validation\_1-logloss:0.32914
- [370] validation\_0-error:0.112864 validation\_0-loglos s:0.303438 validation\_1-error:0.12734 validation\_1-logloss:0.328931
- [371] validation\_0-error:0.112611 validation\_0-loglos s:0.303195 validation\_1-error:0.127623 validation\_1-logloss:0.328904
- [372] validation\_0-error:0.112527 validation\_0-loglos s:0.303029 validation\_1-error:0.127623 validation\_1-logloss:0.328805
- [373] validation\_0-error:0.112527 validation\_0-loglos s:0.302741 validation\_1-error:0.127056 validation\_1-logloss:0.328631
- [374] validation\_0-error:0.112065 validation\_0-loglos s:0.302432 validation\_1-error:0.126205 validation\_1-logloss:0.32824
- [375] validation\_0-error:0.111728 validation\_0-loglos s:0.302229 validation\_1-error:0.126205 validation\_1-logloss:0.328292
- [376] validation\_0-error:0.111602 validation\_0-loglos s:0.301977 validation\_1-error:0.126773 validation\_1-logloss:0.328295

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[377] validation_0-error:0.111812 validation_0-loglos s:0.301696 validation_1-error:0.126773 validation_1-logloss:0.328235
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- [378] validation\_0-error:0.111392 validation\_0-loglos s:0.301467 validation\_1-error:0.126489 validation\_1-logloss:0.327958
- [379] validation\_0-error:0.111518 validation\_0-loglos s:0.301271 validation\_1-error:0.127056 validation\_1-logloss:0.327789
- [380] validation\_0-error:0.111223 validation\_0-loglos s:0.301021 validation\_1-error:0.12734 validation\_1-logloss:0.327692
- [381] validation\_0-error:0.110718 validation\_0-loglos s:0.300746 validation\_1-error:0.126773 validation\_1-logloss:0.327525
- [382] validation\_0-error:0.111223 validation\_0-loglos s:0.300547 validation\_1-error:0.126489 validation\_1-logloss:0.327436
- [383] validation\_0-error:0.111013 validation\_0-loglos s:0.30025 validation\_1-error:0.126773 validation\_1-logloss:0.327352
- [384] validation\_0-error:0.110718 validation\_0-loglos s:0.299992 validation\_1-error:0.126773 validation\_1-logloss:0.327218
- [385] validation\_0-error:0.110718 validation\_0-loglos s:0.29972 validation\_1-error:0.12734 validation\_1-logloss:0.327053
- [386] validation\_0-error:0.110676 validation\_0-loglos s:0.299459 validation\_1-error:0.127056 validation\_1-logloss:0.326907
- [387] validation\_0-error:0.11055 validation\_0-loglos s:0.299209 validation\_1-error:0.125638 validation\_1-logloss:0.326677
- [388] validation\_0-error:0.11055 validation\_0-loglos s:0.298946 validation\_1-error:0.127056 validation\_1-logloss:0.326387
- [389] validation\_0-error:0.110634 validation\_0-loglos s:0.29869 validation\_1-error:0.126489 validation\_1-logloss:0.326294
- [390] validation\_0-error:0.110634 validation\_0-loglos s:0.298488 validation\_1-error:0.12734 validation\_1-logloss:0.326227

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[391] validation_0-error:0.110634 validation_0-loglos s:0.29821 validation_1-error:0.12734 validation_1-logloss:0.326093
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- [392] validation\_0-error:0.110718 validation\_0-loglos s:0.297957 validation\_1-error:0.127623 validation\_1-logloss:0.326003
- [393] validation\_0-error:0.110424 validation\_0-loglos s:0.297706 validation\_1-error:0.127056 validation\_1-logloss:0.325826
- [394] validation\_0-error:0.110382 validation\_0-loglos s:0.297461 validation\_1-error:0.127056 validation\_1-logloss:0.325822
- [395] validation\_0-error:0.110087 validation\_0-loglos s:0.297234 validation\_1-error:0.126773 validation\_1-logloss:0.325827
- [396] validation\_0-error:0.109583 validation\_0-loglos s:0.296993 validation\_1-error:0.126489 validation\_1-logloss:0.325609
- [397] validation\_0-error:0.109751 validation\_0-loglos s:0.296787 validation\_1-error:0.127623 validation\_1-logloss:0.325367
- [398] validation\_0-error:0.109751 validation\_0-loglos s:0.296492 validation\_1-error:0.127056 validation\_1-logloss:0.325139
- [399] validation\_0-error:0.109709 validation\_0-loglos s:0.296278 validation\_1-error:0.126773 validation\_1-logloss:0.325011
- [400] validation\_0-error:0.109751 validation\_0-loglos s:0.296012 validation\_1-error:0.126773 validation\_1-logloss:0.324945
- [401] validation\_0-error:0.109457 validation\_0-loglos s:0.295731 validation\_1-error:0.127623 validation\_1-logloss:0.324669
- [402] validation\_0-error:0.108994 validation\_0-loglos s:0.295491 validation\_1-error:0.127623 validation\_1-logloss:0.324614
- [403] validation\_0-error:0.109036 validation\_0-loglos s:0.295284 validation\_1-error:0.127056 validation\_1-logloss:0.324652
- [404] validation\_0-error:0.108783 validation\_0-loglos s:0.295059 validation\_1-error:0.127056 validation\_1-logloss:0.32465

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[405] validation_0-error:0.108531 validation_0-loglos s:0.294828 validation_1-error:0.126773 validation_1-logloss:0.324524
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- [406] validation\_0-error:0.108405 validation\_0-loglos s:0.294585 validation\_1-error:0.128191 validation\_1-logloss:0.324273
- [407] validation\_0-error:0.108489 validation\_0-loglos s:0.294404 validation\_1-error:0.127056 validation\_1-logloss:0.324065
- [408] validation\_0-error:0.108026 validation\_0-loglos s:0.294158 validation\_1-error:0.126489 validation\_1-logloss:0.324093
- [409] validation\_0-error:0.107606 validation\_0-loglos s:0.293921 validation\_1-error:0.126205 validation\_1-logloss:0.324032
- [410] validation\_0-error:0.107521 validation\_0-loglos s:0.293727 validation\_1-error:0.125922 validation\_1-logloss:0.323828
- [411] validation\_0-error:0.107311 validation\_0-loglos s:0.293441 validation\_1-error:0.125922 validation\_1-logloss:0.323747
- [412] validation\_0-error:0.107269 validation\_0-loglos s:0.293278 validation\_1-error:0.125355 validation\_1-logloss:0.323556
- [413] validation\_0-error:0.107143 validation\_0-loglos s:0.29306 validation\_1-error:0.124787 validation\_1-logloss:0.323499
- [414] validation\_0-error:0.107017 validation\_0-loglos s:0.292825 validation\_1-error:0.124504 validation\_1-logloss:0.323202
- [415] validation\_0-error:0.107017 validation\_0-loglos s:0.292624 validation\_1-error:0.124787 validation\_1-logloss:0.323123
- [416] validation\_0-error:0.106933 validation\_0-loglos s:0.292398 validation\_1-error:0.125071 validation\_1-logloss:0.323038
- [417] validation\_0-error:0.107227 validation\_0-loglos s:0.292139 validation\_1-error:0.123086 validation\_1-logloss:0.322881
- [418] validation\_0-error:0.106975 validation\_0-loglos s:0.29185 validation\_1-error:0.122802 validation\_1-logloss:0.322673

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[419] validation_0-error:0.107101 validation_0-loglos s:0.291694 validation_1-error:0.123369 validation_1-logloss:0.322707
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- [420] validation\_0-error:0.106848 validation\_0-loglos s:0.291476 validation\_1-error:0.123653 validation\_1-logloss:0.32255
- [421] validation\_0-error:0.10689 validation\_0-loglos s:0.291248 validation\_1-error:0.12422 validation\_1-logloss:0.322521
- [422] validation\_0-error:0.106259 validation\_0-loglos s:0.290996 validation\_1-error:0.12422 validation\_1-logloss:0.322219
- [423] validation\_0-error:0.106638 validation\_0-loglos s:0.290756 validation\_1-error:0.124787 validation\_1-logloss:0.322043
- [424] validation\_0-error:0.106259 validation\_0-loglos s:0.290512 validation\_1-error:0.124504 validation\_1-logloss:0.322033
- [425] validation\_0-error:0.106344 validation\_0-loglos s:0.290319 validation\_1-error:0.124787 validation\_1-logloss:0.321961
- [426] validation\_0-error:0.106344 validation\_0-loglos s:0.290134 validation\_1-error:0.125071 validation\_1-logloss:0.321908
- [427] validation\_0-error:0.106091 validation\_0-loglos s:0.289912 validation\_1-error:0.124504 validation\_1-logloss:0.32185
- [428] validation\_0-error:0.106007 validation\_0-loglos s:0.289748 validation\_1-error:0.12422 validation\_1-logloss:0.321692
- [429] validation\_0-error:0.105965 validation\_0-loglos s:0.28949 validation\_1-error:0.12422 validation\_1-logloss:0.321543
- [430] validation\_0-error:0.105881 validation\_0-loglos s:0.289303 validation\_1-error:0.123936 validation\_1-logloss:0.321443
- [431] validation\_0-error:0.105755 validation\_0-loglos s:0.28906 validation\_1-error:0.12422 validation\_1-logloss:0.32137
- [432] validation\_0-error:0.105628 validation\_0-loglos s:0.288838 validation\_1-error:0.124504 validation\_1-logloss:0.321358

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[433] validation_0-error:0.105502 validation_0-loglos s:0.288582 validation_1-error:0.125355 validation_1-logloss:0.32128
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- [434] validation\_0-error:0.105502 validation\_0-loglos s:0.288359 validation\_1-error:0.125355 validation\_1-logloss:0.321214
- [435] validation\_0-error:0.104997 validation\_0-loglos s:0.288128 validation\_1-error:0.12422 validation\_1-logloss:0.321066
- [436] validation\_0-error:0.10504 validation\_0-loglos s:0.287935 validation\_1-error:0.123653 validation\_1-logloss:0.321021
- [437] validation\_0-error:0.104955 validation\_0-loglos s:0.287713 validation\_1-error:0.123086 validation\_1-logloss:0.320923
- [438] validation\_0-error:0.104997 validation\_0-loglos s:0.287518 validation\_1-error:0.123369 validation\_1-logloss:0.320738
- [439] validation\_0-error:0.104787 validation\_0-loglos s:0.287304 validation\_1-error:0.123653 validation\_1-logloss:0.320706
- [440] validation\_0-error:0.104577 validation\_0-loglos s:0.287078 validation\_1-error:0.123369 validation\_1-logloss:0.320635
- [441] validation\_0-error:0.10424 validation\_0-loglos s:0.286841 validation\_1-error:0.122518 validation\_1-logloss:0.320466
- [442] validation\_0-error:0.103946 validation\_0-loglos s:0.286625 validation\_1-error:0.123086 validation\_1-logloss:0.32037
- [443] validation\_0-error:0.103778 validation\_0-loglos s:0.28639 validation\_1-error:0.121951 validation\_1-logloss:0.320137
- [444] validation\_0-error:0.10382 validation\_0-loglos s:0.286221 validation\_1-error:0.123369 validation\_1-logloss:0.320038
- [445] validation\_0-error:0.103651 validation\_0-loglos s:0.28598 validation\_1-error:0.123086 validation\_1-logloss:0.319889
- [446] validation\_0-error:0.103988 validation\_0-loglos s:0.285799 validation\_1-error:0.123086 validation\_1-logloss:0.319788

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[447] validation_0-error:0.103862 validation_0-loglos
s:0.285585 validation_1-error:0.123653 validation_1-
logloss:0.31979
[448] validation_0-error:0.103441 validation_0-loglos
s:0.285357 validation 1-error:0.122802 validation 1-
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[449] validation\_0-error:0.10302 validation\_0-loglos s:0.285126 validation\_1-error:0.122802 validation\_1-logloss:0.31969

logloss:0.319716

- [450] validation\_0-error:0.10302 validation\_0-loglos s:0.284886 validation\_1-error:0.123369 validation\_1-logloss:0.319601
- [451] validation\_0-error:0.103147 validation\_0-loglos s:0.284676 validation\_1-error:0.123653 validation\_1-logloss:0.319502
- [452] validation\_0-error:0.102768 validation\_0-loglos s:0.284486 validation\_1-error:0.123086 validation\_1-logloss:0.319297
- [453] validation\_0-error:0.102726 validation\_0-loglos s:0.284281 validation\_1-error:0.123086 validation\_1-logloss:0.319119
- [454] validation\_0-error:0.102347 validation\_0-loglos s:0.284063 validation\_1-error:0.123086 validation\_1-logloss:0.318941
- [455] validation\_0-error:0.101885 validation\_0-loglos s:0.283833 validation\_1-error:0.122518 validation\_1-logloss:0.318979
- [456] validation\_0-error:0.102095 validation\_0-loglos s:0.283619 validation\_1-error:0.123369 validation\_1-logloss:0.318771
- [457] validation\_0-error:0.102179 validation\_0-loglos s:0.283396 validation\_1-error:0.123086 validation\_1-logloss:0.318641
- [458] validation\_0-error:0.101969 validation\_0-loglos s:0.28317 validation\_1-error:0.122235 validation\_1-logloss:0.318414
- [459] validation\_0-error:0.101674 validation\_0-loglos s:0.282935 validation\_1-error:0.122235 validation\_1-logloss:0.318262
- [460] validation\_0-error:0.101422 validation\_0-loglos s:0.282743 validation\_1-error:0.122235 validation\_1-logloss:0.318047

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[461] validation_0-error:0.101422 validation_0-loglos s:0.282541 validation_1-error:0.122518 validation_1-logloss:0.318027
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- [462] validation\_0-error:0.101169 validation\_0-loglos s:0.282329 validation\_1-error:0.122518 validation\_1-logloss:0.318022
- [463] validation\_0-error:0.101127 validation\_0-loglos s:0.282094 validation\_1-error:0.121384 validation\_1-logloss:0.31799
- [464] validation\_0-error:0.101296 validation\_0-loglos s:0.281866 validation\_1-error:0.1211 validation\_1-loglos s:0.317948
- [465] validation\_0-error:0.101296 validation\_0-loglos s:0.281621 validation\_1-error:0.120533 validation\_1-logloss:0.317767
- [466] validation\_0-error:0.100791 validation\_0-loglos s:0.281366 validation\_1-error:0.120817 validation\_1-logloss:0.317589
- [467] validation\_0-error:0.101001 validation\_0-loglos s:0.281162 validation\_1-error:0.120817 validation\_1-logloss:0.317535
- [468] validation\_0-error:0.100875 validation\_0-loglos s:0.280926 validation\_1-error:0.12025 validation\_1-logloss:0.317324
- [469] validation\_0-error:0.10037 validation\_0-loglos s:0.280688 validation\_1-error:0.12025 validation\_1-logloss:0.317072
- [470] validation\_0-error:0.100076 validation\_0-loglos s:0.280459 validation\_1-error:0.120533 validation\_1-logloss:0.317047
- [471] validation\_0-error:0.10016 validation\_0-loglos s:0.280223 validation\_1-error:0.12025 validation\_1-logloss:0.316902
- [472] validation\_0-error:0.099697 validation\_0-loglos s:0.280086 validation\_1-error:0.119966 validation\_1-logloss:0.316827
- [473] validation\_0-error:0.099655 validation\_0-loglos
  s:0.279895 validation\_1-error:0.119966 validation\_1logloss:0.316699
- [474] validation\_0-error:0.099108 validation\_0-loglos
  s:0.279673 validation\_1-error:0.119682 validation\_1logloss:0.316593

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[475] validation 0-error:0.09915 validation 0-loglos
s:0.279429
          validation 1-error:0.119966
                                          validation 1-
logloss:0.316432
[476] validation 0-error:0.098982 validation 0-loglos
s:0.279226 validation 1-error:0.12025
                                          validation 1-
logloss:0.316227
[477] validation 0-error:0.099024 validation 0-loglos
                                         validation 1-
s:0.279039 validation 1-error:0.12025
logloss:0.316046
[478] validation 0-error:0.098856 validation 0-loglos
s:0.278775 validation 1-error:0.12025
                                         validation 1-
logloss:0.315823
[479] validation 0-error:0.098772 validation 0-loglos
s:0.278604 validation 1-error:0.12025
                                         validation 1-
logloss:0.315697
[480] validation 0-error:0.098688 validation 0-loglos
          validation 1-error:0.119399
s:0.278404
                                      validation 1-
logloss:0.315521
[481] validation 0-error:0.098603 validation 0-loglos
s:0.278185
          validation 1-error:0.119399
                                          validation 1-
logloss:0.315525
[482] validation 0-error:0.098561 validation 0-loglos
          validation 1-error:0.118832
                                          validation 1-
s:0.277869
logloss:0.315202
[483] validation 0-error:0.098393 validation 0-loglos
           validation 1-error:0.119399
                                          validation 1-
s:0.277726
logloss:0.314987
[484] validation 0-error:0.098099 validation 0-loglos
s:0.277527 validation 1-error:0.119682
                                          validation 1-
logloss:0.314926
[485] validation 0-error:0.098561 validation 0-loglos
          validation 1-error:0.12025
                                          validation 1-
s:0.277323
logloss:0.315006
[486] validation 0-error:0.098351 validation 0-loglos
           validation 1-error:0.12025
s:0.277111
                                         validation 1-
logloss:0.314994
[487] validation 0-error:0.098267 validation 0-loglos
s:0.276894 validation 1-error:0.119966
                                          validation 1-
logloss:0.314853
[488] validation 0-error:0.098225 validation 0-loglos
s:0.276706 validation 1-error:0.119682 validation 1-
logloss:0.314737
```

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[489] validation_0-error:0.098267 validation_0-loglos s:0.276539 validation_1-error:0.119682 validation_1-logloss:0.3147
```

- [490] validation\_0-error:0.098309 validation\_0-loglos s:0.276375 validation\_1-error:0.12025 validation\_1-logloss:0.314589
- [491] validation\_0-error:0.097804 validation\_0-loglos s:0.276185 validation\_1-error:0.119399 validation\_1-logloss:0.314476
- [492] validation\_0-error:0.097383 validation\_0-loglos s:0.275974 validation\_1-error:0.119115 validation\_1-logloss:0.314439
- [493] validation\_0-error:0.097257 validation\_0-loglos s:0.275773 validation\_1-error:0.119115 validation\_1-logloss:0.314287
- [494] validation\_0-error:0.097257 validation\_0-loglos s:0.275531 validation\_1-error:0.117981 validation\_1-logloss:0.314091
- [495] validation\_0-error:0.097173 validation\_0-loglos s:0.27535 validation\_1-error:0.119399 validation\_1-logloss:0.31384
- [496] validation\_0-error:0.096879 validation\_0-loglos s:0.275196 validation\_1-error:0.119115 validation\_1-logloss:0.313855
- [497] validation\_0-error:0.096752 validation\_0-loglos s:0.274952 validation\_1-error:0.118548 validation\_1-logloss:0.313762
- [498] validation\_0-error:0.096542 validation\_0-loglos s:0.274764 validation\_1-error:0.118832 validation\_1-logloss:0.31379
- [499] validation\_0-error:0.0965 validation\_0-logloss:0.27 4544 validation\_1-error:0.119115 validation\_1-loglos s:0.313648
- [500] validation\_0-error:0.0965 validation\_0-logloss:0.27
  4361 validation\_1-error:0.119115 validation\_1-loglos
  s:0.313615
- [501] validation\_0-error:0.096416 validation\_0-loglos s:0.274157 validation\_1-error:0.119399 validation\_1-logloss:0.31362
- [502] validation\_0-error:0.096626 validation\_0-loglos s:0.273931 validation\_1-error:0.119682 validation\_1-logloss:0.313492

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[503] validation 0-error:0.0965 validation 0-logloss:0.27
```

- 372 validation\_1-error:0.119399 validation\_1-loglos s:0.313381
- [504] validation\_0-error:0.096206 validation\_0-loglos s:0.273527 validation\_1-error:0.119682 validation\_1-
- logloss:0.313465
- [505] validation\_0-error:0.096332 validation\_0-loglos s:0.273401 validation\_1-error:0.119966 validation\_1-
- logloss:0.313387
- [506] validation\_0-error:0.096079 validation\_0-loglos
- s:0.273237 validation\_1-error:0.119966 validation\_1-logloss:0.313384
- [507] validation\_0-error:0.095995 validation\_0-loglos s:0.273051 validation\_1-error:0.119682 validation\_1-logloss:0.313221
- [508] validation\_0-error:0.095995 validation\_0-loglos s:0.272924 validation\_1-error:0.119682 validation\_1-logloss:0.313237
- [509] validation\_0-error:0.095911 validation\_0-loglos s:0.272725 validation\_1-error:0.119682 validation\_1-logloss:0.31314
- [510] validation\_0-error:0.095785 validation\_0-loglos s:0.272458 validation\_1-error:0.119399 validation\_1-logloss:0.313075
- [511] validation\_0-error:0.095533 validation\_0-loglos s:0.272262 validation\_1-error:0.119682 validation\_1-logloss:0.313055
- [512] validation\_0-error:0.09549 validation\_0-loglos s:0.272053 validation\_1-error:0.119966 validation\_1-logloss:0.312863
- [513] validation\_0-error:0.095322 validation\_0-loglos s:0.271874 validation\_1-error:0.119682 validation\_1-logloss:0.312772
- [514] validation\_0-error:0.09549 validation\_0-loglos s:0.27171 validation\_1-error:0.119399 validation\_1-logloss:0.312712
- [515] validation\_0-error:0.09549 validation\_0-loglos s:0.271598 validation\_1-error:0.119682 validation\_1-logloss:0.312686
- [516] validation\_0-error:0.095196 validation\_0-loglos s:0.271392 validation\_1-error:0.119115 validation\_1-logloss:0.312576

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[517] validation_0-error:0.095575 validation_0-loglos s:0.271197 validation_1-error:0.118264 validation_1-logloss:0.312526
```

- [518] validation\_0-error:0.095533 validation\_0-loglos s:0.270988 validation\_1-error:0.117697 validation\_1-logloss:0.312342
- [519] validation\_0-error:0.095364 validation\_0-loglos s:0.270821 validation\_1-error:0.118264 validation\_1-logloss:0.312436
- [520] validation\_0-error:0.094944 validation\_0-loglos s:0.270633 validation\_1-error:0.119399 validation\_1-logloss:0.312372
- [521] validation\_0-error:0.094523 validation\_0-loglos s:0.27045 validation\_1-error:0.12025 validation\_1-logloss:0.312474
- [522] validation\_0-error:0.094481 validation\_0-loglos s:0.270292 validation\_1-error:0.119682 validation\_1-logloss:0.312335
- [523] validation\_0-error:0.094102 validation\_0-loglos s:0.270099 validation\_1-error:0.119115 validation\_1-logloss:0.312293
- [524] validation\_0-error:0.094481 validation\_0-loglos s:0.269915 validation\_1-error:0.119966 validation\_1-logloss:0.312157
- [525] validation\_0-error:0.094691 validation\_0-loglos s:0.269749 validation\_1-error:0.119966 validation\_1-logloss:0.312055
- [526] validation\_0-error:0.094229 validation\_0-loglos s:0.269572 validation\_1-error:0.119399 validation\_1-logloss:0.311894
- [527] validation\_0-error:0.09406 validation\_0-loglos s:0.269354 validation\_1-error:0.118264 validation\_1-logloss:0.311693
- [528] validation\_0-error:0.094271 validation\_0-loglos s:0.269143 validation\_1-error:0.117981 validation\_1-logloss:0.311496
- [529] validation\_0-error:0.093934 validation\_0-loglos s:0.268997 validation\_1-error:0.117981 validation\_1-logloss:0.311443
- [530] validation\_0-error:0.093598 validation\_0-loglos s:0.268786 validation\_1-error:0.118264 validation\_1-logloss:0.311308

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[531] validation_0-error:0.093555 validation_0-loglos s:0.268541 validation_1-error:0.118264 validation_1-logloss:0.311049
```

- [532] validation\_0-error:0.093429 validation\_0-loglos s:0.268358 validation\_1-error:0.118264 validation\_1-logloss:0.310867
- [533] validation\_0-error:0.093555 validation\_0-loglos s:0.268189 validation\_1-error:0.117981 validation\_1-logloss:0.310758
- [534] validation\_0-error:0.093219 validation\_0-loglos s:0.268068 validation\_1-error:0.118832 validation\_1-logloss:0.310708
- [535] validation\_0-error:0.093387 validation\_0-loglos s:0.267853 validation\_1-error:0.118264 validation\_1-logloss:0.31057
- [536] validation\_0-error:0.093303 validation\_0-loglos s:0.267686 validation\_1-error:0.117981 validation\_1-logloss:0.310496
- [537] validation\_0-error:0.093219 validation\_0-loglos s:0.267509 validation\_1-error:0.117981 validation\_1-logloss:0.310392
- [538] validation\_0-error:0.093051 validation\_0-loglos s:0.267344 validation\_1-error:0.117697 validation\_1-logloss:0.310276
- [539] validation\_0-error:0.093051 validation\_0-loglos s:0.267174 validation\_1-error:0.118264 validation\_1-logloss:0.310167
- [540] validation\_0-error:0.092924 validation\_0-loglos s:0.266984 validation\_1-error:0.118548 validation\_1-logloss:0.31013
- [541] validation\_0-error:0.092672 validation\_0-loglos s:0.266772 validation\_1-error:0.119115 validation\_1-logloss:0.310121
- [542] validation\_0-error:0.092714 validation\_0-loglos s:0.266599 validation\_1-error:0.119115 validation\_1-logloss:0.309989
- [543] validation\_0-error:0.092504 validation\_0-loglos s:0.266469 validation\_1-error:0.118548 validation\_1-logloss:0.309863
- [544] validation\_0-error:0.092378 validation\_0-loglos s:0.266285 validation\_1-error:0.118832 validation\_1-logloss:0.309747

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[545] validation_0-error:0.092167 validation_0-loglos s:0.266088 validation_1-error:0.118264 validation_1-logloss:0.309863
```

- [546] validation\_0-error:0.092209 validation\_0-loglos s:0.265893 validation\_1-error:0.118264 validation\_1-logloss:0.309843
- [547] validation\_0-error:0.09242 validation\_0-loglos s:0.265709 validation\_1-error:0.117697 validation\_1-logloss:0.309787
- [548] validation\_0-error:0.09263 validation\_0-loglos s:0.265497 validation\_1-error:0.117413 validation\_1-logloss:0.309529
- [549] validation\_0-error:0.091957 validation\_0-loglos s:0.265304 validation\_1-error:0.116563 validation\_1-logloss:0.309331
- [550] validation\_0-error:0.091957 validation\_0-loglos s:0.265108 validation\_1-error:0.116563 validation\_1-logloss:0.30907
- [551] validation\_0-error:0.091747 validation\_0-loglos s:0.264962 validation\_1-error:0.116279 validation\_1-logloss:0.308928
- [552] validation\_0-error:0.091578 validation\_0-loglos s:0.264806 validation\_1-error:0.116279 validation\_1-logloss:0.308802
- [553] validation\_0-error:0.09141 validation\_0-loglos s:0.26462 validation\_1-error:0.115712 validation\_1-logloss:0.308823
- [554] validation\_0-error:0.091326 validation\_0-loglos s:0.264455 validation\_1-error:0.114861 validation\_1-logloss:0.308717
- [555] validation\_0-error:0.091031 validation\_0-loglos s:0.264264 validation\_1-error:0.115145 validation\_1-logloss:0.308684
- [556] validation\_0-error:0.0912 validation\_0-logloss:0.26
  4092 validation\_1-error:0.115428 validation\_1-loglos
  s:0.308506
- [557] validation\_0-error:0.090989 validation\_0-loglos s:0.263959 validation\_1-error:0.114577 validation\_1-logloss:0.308467
- [558] validation\_0-error:0.090947 validation\_0-loglos
  s:0.263751 validation\_1-error:0.115428 validation\_1logloss:0.308359

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[559] validation 0-error:0.090947 validation 0-loglos
s:0.263542
          validation 1-error:0.11401
                                         validation 1-
logloss:0.308098
[560] validation 0-error:0.090485 validation 0-loglos
s:0.263325 validation 1-error:0.114577
                                         validation 1-
logloss:0.307995
[561] validation 0-error:0.090316 validation 0-loglos
s:0.263129 validation 1-error:0.11401
                                         validation 1-
logloss:0.307918
[562] validation 0-error:0.090358 validation 0-loglos
s:0.262981 validation 1-error:0.11401 validation 1-
logloss:0.308001
[563] validation 0-error:0.090443 validation 0-loglos
s:0.262818 validation 1-error:0.11401 validation 1-
logloss:0.308053
[564] validation 0-error:0.090274 validation 0-loglos
          validation 1-error:0.11401 validation 1-
s:0.262653
logloss:0.308029
[565] validation 0-error:0.090022 validation 0-loglos
s:0.262498
          validation 1-error:0.114577
                                         validation 1-
logloss:0.308019
[566] validation 0-error:0.08998 validation 0-loglos
          validation 1-error:0.115145
                                         validation 1-
s:0.262308
logloss:0.307917
[567] validation 0-error:0.08998 validation 0-loglos
           validation 1-error:0.11713
                                         validation 1-
s:0.262068
logloss:0.307711
[568] validation 0-error:0.089896 validation 0-loglos
           validation 1-error:0.116279
s:0.261892
                                         validation 1-
logloss:0.307684
[569] validation 0-error:0.089769 validation 0-loglos
           validation 1-error:0.11713
                                         validation 1-
s:0.261782
logloss:0.307582
[570] validation 0-error:0.089769 validation 0-loglos
           validation 1-error:0.116846 validation 1-
s:0.2616
logloss:0.307543
[571] validation 0-error:0.089685 validation 0-loglos
s:0.261474 validation 1-error:0.116846
                                         validation 1-
logloss:0.307496
[572] validation 0-error:0.089559 validation 0-loglos
s:0.261259 validation 1-error:0.11713 validation 1-
logloss:0.307344
```

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[573] validation_0-error:0.089391 validation_0-loglos s:0.261062 validation_1-error:0.116846 validation_1-logloss:0.307231
```

- [574] validation\_0-error:0.089433 validation\_0-loglos s:0.260883 validation\_1-error:0.116279 validation\_1-logloss:0.307129
- [575] validation\_0-error:0.089433 validation\_0-loglos s:0.260687 validation\_1-error:0.115712 validation\_1-logloss:0.307007
- [576] validation\_0-error:0.089349 validation\_0-loglos s:0.260479 validation\_1-error:0.115712 validation\_1-logloss:0.306847
- [577] validation\_0-error:0.089223 validation\_0-loglos s:0.260323 validation\_1-error:0.115712 validation\_1-logloss:0.306804
- [578] validation\_0-error:0.089181 validation\_0-loglos s:0.260152 validation\_1-error:0.116846 validation\_1-logloss:0.306753
- [579] validation\_0-error:0.089096 validation\_0-loglos s:0.25996 validation\_1-error:0.116563 validation\_1-logloss:0.306697
- [580] validation\_0-error:0.088676 validation\_0-loglos s:0.25977 validation\_1-error:0.115995 validation\_1-logloss:0.306502
- [581] validation\_0-error:0.088592 validation\_0-loglos s:0.259588 validation\_1-error:0.115712 validation\_1-logloss:0.306449
- [582] validation\_0-error:0.088507 validation\_0-loglos s:0.259436 validation\_1-error:0.115712 validation\_1-logloss:0.30638
- [583] validation\_0-error:0.088592 validation\_0-loglos s:0.259246 validation\_1-error:0.115995 validation\_1-logloss:0.306436
- [584] validation\_0-error:0.088592 validation\_0-loglos s:0.259132 validation\_1-error:0.115995 validation\_1-logloss:0.306455
- [585] validation\_0-error:0.088802 validation\_0-loglos s:0.25894 validation\_1-error:0.116279 validation\_1-logloss:0.30648
- [586] validation\_0-error:0.088507 validation\_0-loglos s:0.258774 validation\_1-error:0.116279 validation\_1-logloss:0.306432

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[587] validation 0-error:0.088592 validation 0-loglos
           validation 1-error:0.117413
                                          validation 1-
s:0.2586
logloss:0.306308
[588] validation 0-error:0.088507 validation 0-loglos
s:0.258394 validation 1-error:0.116563
                                         validation 1-
logloss:0.306183
[589] validation 0-error:0.088255 validation 0-loglos
s:0.258213 validation 1-error:0.115428
                                         validation 1-
logloss:0.306082
[590] validation 0-error:0.088213 validation 0-loglos
s:0.258016 validation 1-error:0.115145
                                         validation 1-
logloss:0.306012
[591] validation 0-error:0.088381 validation 0-loglos
s:0.257836 validation 1-error:0.115712
                                         validation 1-
logloss:0.305931
[592] validation 0-error:0.088087 validation 0-loglos
          validation 1-error:0.115428 validation 1-
s:0.257669
logloss:0.305954
[593] validation 0-error:0.08775 validation 0-loglos
s:0.257495
          validation 1-error:0.115428
                                         validation 1-
logloss:0.305875
[594] validation 0-error:0.087666 validation 0-loglos
          validation 1-error:0.115145
                                          validation 1-
s:0.257387
logloss:0.305829
[595] validation 0-error:0.087666 validation 0-loglos
           validation 1-error:0.115145
                                         validation 1-
s:0.257201
logloss:0.30571
[596] validation 0-error:0.087792 validation 0-loglos
           validation 1-error:0.115428
s:0.257054
                                          validation 1-
```

[597] validation\_0-error:0.087666 validation\_0-loglos s:0.256887 validation\_1-error:0.114861 validation\_1-logloss:0.305522

logloss:0.305582

- [598] validation\_0-error:0.087582 validation\_0-loglos s:0.256723 validation\_1-error:0.115712 validation\_1-logloss:0.305462
- [599] validation\_0-error:0.087161 validation\_0-loglos s:0.256514 validation\_1-error:0.115428 validation\_1-logloss:0.305463
- [600] validation\_0-error:0.087456 validation\_0-loglos s:0.256338 validation\_1-error:0.117413 validation\_1-logloss:0.305416

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[601] validation_0-error:0.087246 validation_0-loglos
s:0.256189 validation_1-error:0.116846 validation_1-
logloss:0.305313
```

- [602] validation\_0-error:0.087246 validation\_0-loglos s:0.256023 validation\_1-error:0.116279 validation\_1-logloss:0.30543
- [603] validation\_0-error:0.087288 validation\_0-loglos s:0.255849 validation\_1-error:0.115995 validation\_1-logloss:0.305449
- [604] validation\_0-error:0.087203 validation\_0-loglos s:0.255653 validation\_1-error:0.115712 validation\_1-logloss:0.305399
- [605] validation\_0-error:0.087035 validation\_0-loglos s:0.255498 validation\_1-error:0.115712 validation\_1-logloss:0.305395
- [606] validation\_0-error:0.086278 validation\_0-loglos s:0.255336 validation\_1-error:0.115428 validation\_1-logloss:0.30538
- [607] validation\_0-error:0.086362 validation\_0-loglos s:0.255165 validation\_1-error:0.115712 validation\_1-logloss:0.305344
- [608] validation\_0-error:0.08632 validation\_0-loglos s:0.255018 validation\_1-error:0.115995 validation\_1-logloss:0.305214
- [609] validation\_0-error:0.086194 validation\_0-loglos s:0.25487 validation\_1-error:0.115712 validation\_1-logloss:0.305237
- [610] validation\_0-error:0.086404 validation\_0-loglos s:0.254681 validation\_1-error:0.116279 validation\_1-logloss:0.305179
- [611] validation\_0-error:0.086699 validation\_0-loglos s:0.254507 validation\_1-error:0.115995 validation\_1-logloss:0.305098
- [612] validation\_0-error:0.08653 validation\_0-loglos s:0.254338 validation\_1-error:0.115995 validation\_1-logloss:0.304966
- [613] validation\_0-error:0.086278 validation\_0-loglos s:0.254209 validation\_1-error:0.115995 validation\_1-logloss:0.304729
- [614] validation\_0-error:0.08632 validation\_0-loglos
  s:0.254034 validation\_1-error:0.115712 validation\_1logloss:0.304637

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[615] validation_0-error:0.086278 validation_0-loglos
s:0.253858 validation_1-error:0.115995 validation_1-
logloss:0.304632
```

- [616] validation\_0-error:0.085984 validation\_0-loglos s:0.253697 validation\_1-error:0.115428 validation\_1-logloss:0.304585
- [617] validation\_0-error:0.085773 validation\_0-loglos
  s:0.25353 validation\_1-error:0.115145 validation\_1logloss:0.304522
- [618] validation\_0-error:0.08611 validation\_0-loglos
  s:0.253352 validation\_1-error:0.115712 validation\_1logloss:0.304431
- [619] validation\_0-error:0.085773 validation\_0-loglos
  s:0.253256 validation\_1-error:0.116279 validation\_1logloss:0.304316
- [620] validation\_0-error:0.085773 validation\_0-loglos
  s:0.253078 validation\_1-error:0.115995 validation\_1logloss:0.304194
- [621] validation\_0-error:0.085689 validation\_0-loglos s:0.252908 validation\_1-error:0.115995 validation\_1-logloss:0.304082
- [622] validation\_0-error:0.085689 validation\_0-loglos s:0.252711 validation\_1-error:0.116563 validation\_1-logloss:0.304029
- [623] validation\_0-error:0.085647 validation\_0-loglos s:0.25249 validation\_1-error:0.116279 validation\_1-logloss:0.303879
- [624] validation\_0-error:0.085563 validation\_0-loglos s:0.25234 validation\_1-error:0.116563 validation\_1-logloss:0.303847
- [625] validation\_0-error:0.085353 validation\_0-loglos
  s:0.252217 validation\_1-error:0.117413 validation\_1logloss:0.303779
- [626] validation\_0-error:0.085395 validation\_0-loglos s:0.252039 validation\_1-error:0.115995 validation\_1-logloss:0.303665
- [627] validation\_0-error:0.085226 validation\_0-loglos
  s:0.251899 validation\_1-error:0.115712 validation\_1logloss:0.303559
- [628] validation\_0-error:0.085016 validation\_0-loglos s:0.251707 validation\_1-error:0.115145 validation\_1-logloss:0.30337

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[629] validation_0-error:0.085353 validation_0-loglos
s:0.251534 validation_1-error:0.115145 validation_1-
logloss:0.303273
```

- [630] validation\_0-error:0.085142 validation\_0-loglos s:0.251339 validation\_1-error:0.116279 validation\_1-logloss:0.303141
- [631] validation\_0-error:0.085184 validation\_0-loglos s:0.251191 validation\_1-error:0.116279 validation\_1-logloss:0.303035
- [632] validation\_0-error:0.085016 validation\_0-loglos
  s:0.251001 validation\_1-error:0.115712 validation\_1logloss:0.303111
- [633] validation\_0-error:0.085226 validation\_0-loglos s:0.250843 validation\_1-error:0.115145 validation\_1-logloss:0.303054
- [634] validation\_0-error:0.085226 validation\_0-loglos s:0.250685 validation\_1-error:0.115712 validation\_1-logloss:0.303054
- [635] validation\_0-error:0.085016 validation\_0-loglos s:0.250484 validation\_1-error:0.115428 validation\_1-logloss:0.303051
- [636] validation\_0-error:0.084932 validation\_0-loglos s:0.250328 validation\_1-error:0.115428 validation\_1-logloss:0.302956
- [637] validation\_0-error:0.084806 validation\_0-loglos s:0.250236 validation\_1-error:0.115712 validation\_1-logloss:0.30286
- [638] validation\_0-error:0.084637 validation\_0-loglos s:0.250086 validation\_1-error:0.114861 validation\_1-logloss:0.302888
- [639] validation\_0-error:0.084595 validation\_0-loglos s:0.249994 validation\_1-error:0.114861 validation\_1-logloss:0.302798
- [640] validation\_0-error:0.084469 validation\_0-loglos s:0.249837 validation\_1-error:0.114861 validation\_1-logloss:0.302682
- [641] validation\_0-error:0.084469 validation\_0-loglos s:0.249688 validation\_1-error:0.114861 validation\_1-logloss:0.30263
- [642] validation\_0-error:0.084217 validation\_0-loglos
  s:0.249521 validation\_1-error:0.114861 validation\_1logloss:0.302645

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[643] validation_0-error:0.084217 validation_0-loglos
s:0.249338 validation_1-error:0.114577 validation_1-
logloss:0.30244
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- [644] validation\_0-error:0.084259 validation\_0-loglos s:0.249204 validation\_1-error:0.114294 validation\_1-logloss:0.302278
- [645] validation\_0-error:0.084133 validation\_0-loglos
  s:0.24904 validation\_1-error:0.11401 validation\_1logloss:0.302264
- [646] validation\_0-error:0.084091 validation\_0-loglos s:0.248908 validation\_1-error:0.113727 validation\_1-logloss:0.302323
- [647] validation\_0-error:0.083922 validation\_0-loglos
  s:0.248744 validation\_1-error:0.114294 validation\_1logloss:0.302395
- [648] validation\_0-error:0.08367 validation\_0-loglos s:0.24856 validation\_1-error:0.114577 validation\_1-logloss:0.302429
- [649] validation\_0-error:0.083838 validation\_0-loglos s:0.248426 validation\_1-error:0.114294 validation\_1-logloss:0.30239
- [650] validation\_0-error:0.083796 validation\_0-loglos s:0.248274 validation\_1-error:0.114861 validation\_1-logloss:0.302357
- [651] validation\_0-error:0.083796 validation\_0-loglos
  s:0.24811 validation\_1-error:0.114577 validation\_1logloss:0.30207
- [652] validation\_0-error:0.083964 validation\_0-loglos s:0.24791 validation\_1-error:0.114861 validation\_1-logloss:0.301985
- [653] validation\_0-error:0.083502 validation\_0-loglos s:0.247726 validation\_1-error:0.115428 validation\_1-logloss:0.301807
- [654] validation\_0-error:0.083165 validation\_0-loglos
  s:0.247553 validation\_1-error:0.115145 validation\_1logloss:0.301792
- [655] validation\_0-error:0.083291 validation\_0-loglos
  s:0.247421 validation\_1-error:0.115145 validation\_1logloss:0.301796
- [656] validation\_0-error:0.083249 validation\_0-loglos s:0.24733 validation\_1-error:0.114861 validation\_1-logloss:0.301856

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[657] validation_0-error:0.082997 validation_0-loglos
s:0.247189 validation_1-error:0.114577 validation_1-
logloss:0.301861
[658] validation_0-error:0.083165 validation_0-loglos
s:0.247038 validation 1-error:0.114861 validation 1-
```

[659] validation\_0-error:0.083165 validation\_0-loglos
s:0.246868 validation\_1-error:0.114861 validation\_1logloss:0.30165

logloss:0.301721

- [660] validation\_0-error:0.083165 validation\_0-loglos
  s:0.246747 validation\_1-error:0.114294 validation\_1logloss:0.301658
- [661] validation\_0-error:0.083123 validation\_0-loglos
  s:0.246575 validation\_1-error:0.114294 validation\_1logloss:0.301623
- [662] validation\_0-error:0.082955 validation\_0-loglos
  s:0.246463 validation\_1-error:0.11401 validation\_1logloss:0.301613
- [663] validation\_0-error:0.082618 validation\_0-loglos s:0.246314 validation\_1-error:0.113727 validation\_1-logloss:0.301683
- [664] validation\_0-error:0.082534 validation\_0-loglos s:0.246163 validation\_1-error:0.113727 validation\_1-logloss:0.301609
- [665] validation\_0-error:0.082155 validation\_0-loglos
  s:0.246013 validation\_1-error:0.113727 validation\_1logloss:0.301514
- [666] validation\_0-error:0.082113 validation\_0-loglos s:0.245879 validation\_1-error:0.114294 validation\_1-logloss:0.301417
- [667] validation\_0-error:0.082029 validation\_0-loglos
  s:0.245722 validation\_1-error:0.11401 validation\_1logloss:0.301359
- [668] validation\_0-error:0.081903 validation\_0-loglos s:0.245586 validation\_1-error:0.114294 validation\_1-logloss:0.301319
- [669] validation\_0-error:0.081777 validation\_0-loglos s:0.245449 validation\_1-error:0.114577 validation\_1-logloss:0.301266
- [670] validation\_0-error:0.081903 validation\_0-loglos
  s:0.245264 validation\_1-error:0.114861 validation\_1logloss:0.301215

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[671] validation_0-error:0.081777 validation_0-loglos
s:0.245074 validation_1-error:0.115145 validation_1-
logloss:0.301137
```

- [672] validation\_0-error:0.081693 validation\_0-loglos
  s:0.244921 validation\_1-error:0.114294 validation\_1logloss:0.300975
- [673] validation\_0-error:0.081482 validation\_0-loglos s:0.244755 validation\_1-error:0.114294 validation\_1-logloss:0.30087
- [674] validation\_0-error:0.08144 validation\_0-loglos
  s:0.244632 validation\_1-error:0.115428 validation\_1logloss:0.30081
- [675] validation\_0-error:0.081693 validation\_0-loglos
  s:0.244465 validation\_1-error:0.115428 validation\_1logloss:0.300772
- [676] validation\_0-error:0.081609 validation\_0-loglos
  s:0.244307 validation\_1-error:0.115145 validation\_1logloss:0.300716
- [677] validation\_0-error:0.081524 validation\_0-loglos
  s:0.244173 validation\_1-error:0.115145 validation\_1logloss:0.300687
- [678] validation\_0-error:0.081735 validation\_0-loglos
  s:0.244038 validation\_1-error:0.115145 validation\_1logloss:0.30065
- [679] validation\_0-error:0.081356 validation\_0-loglos
  s:0.243873 validation\_1-error:0.11401 validation\_1logloss:0.300486
- [680] validation\_0-error:0.08102 validation\_0-loglos s:0.243711 validation\_1-error:0.114577 validation\_1-logloss:0.300464
- [681] validation\_0-error:0.081314 validation\_0-loglos s:0.243558 validation\_1-error:0.113727 validation\_1-logloss:0.300292
- [682] validation\_0-error:0.081104 validation\_0-loglos s:0.243398 validation\_1-error:0.114294 validation\_1-logloss:0.300239
- [683] validation\_0-error:0.08102 validation\_0-loglos s:0.243277 validation\_1-error:0.11401 validation\_1-logloss:0.300162
- [684] validation\_0-error:0.080936 validation\_0-loglos s:0.243124 validation\_1-error:0.114861 validation\_1-logloss:0.300134

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[685] validation_0-error:0.080767 validation_0-loglos s:0.242957 validation_1-error:0.114577 validation_1-logloss:0.300013
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- [686] validation\_0-error:0.080767 validation\_0-loglos s:0.242773 validation\_1-error:0.114577 validation\_1-logloss:0.300001
- [687] validation\_0-error:0.080936 validation\_0-loglos s:0.242588 validation\_1-error:0.114861 validation\_1-logloss:0.299905
- [688] validation\_0-error:0.080893 validation\_0-loglos s:0.242418 validation\_1-error:0.114861 validation\_1-logloss:0.299823
- [689] validation\_0-error:0.081062 validation\_0-loglos s:0.242253 validation\_1-error:0.114577 validation\_1-logloss:0.299753
- [690] validation\_0-error:0.080641 validation\_0-loglos s:0.242098 validation\_1-error:0.114294 validation\_1-logloss:0.299781
- [691] validation\_0-error:0.080641 validation\_0-loglos s:0.241925 validation\_1-error:0.114294 validation\_1-logloss:0.299723
- [692] validation\_0-error:0.080557 validation\_0-loglos s:0.241757 validation\_1-error:0.114861 validation\_1-logloss:0.299573
- [693] validation\_0-error:0.080557 validation\_0-loglos s:0.241576 validation\_1-error:0.114577 validation\_1-logloss:0.299608
- [694] validation\_0-error:0.080599 validation\_0-loglos s:0.241476 validation\_1-error:0.115145 validation\_1-logloss:0.29951
- [695] validation\_0-error:0.080599 validation\_0-loglos s:0.241328 validation\_1-error:0.115145 validation\_1-logloss:0.299522
- [696] validation\_0-error:0.080599 validation\_0-loglos s:0.241204 validation\_1-error:0.114861 validation\_1-logloss:0.299595
- [697] validation\_0-error:0.080178 validation\_0-loglos s:0.241049 validation\_1-error:0.114861 validation\_1-logloss:0.299562
- [698] validation\_0-error:0.080094 validation\_0-loglos s:0.240921 validation\_1-error:0.115428 validation\_1-logloss:0.299474

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[699] validation_0-error:0.080347 validation_0-loglos
s:0.240749 validation_1-error:0.115145 validation_1-
logloss:0.299322
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- [700] validation\_0-error:0.080136 validation\_0-loglos s:0.240639 validation\_1-error:0.115428 validation\_1-logloss:0.29932
- [701] validation\_0-error:0.080431 validation\_0-loglos s:0.240554 validation\_1-error:0.115428 validation\_1-logloss:0.299311
- [702] validation\_0-error:0.080305 validation\_0-loglos s:0.240427 validation\_1-error:0.115428 validation\_1-logloss:0.299201
- [703] validation\_0-error:0.080052 validation\_0-loglos s:0.240272 validation\_1-error:0.115428 validation\_1-logloss:0.299202
- [704] validation\_0-error:0.079758 validation\_0-loglos s:0.240122 validation\_1-error:0.115428 validation\_1-logloss:0.299109
- [705] validation\_0-error:0.079884 validation\_0-loglos s:0.239955 validation\_1-error:0.115428 validation\_1-logloss:0.298948
- [706] validation\_0-error:0.079589 validation\_0-loglos s:0.239789 validation\_1-error:0.115995 validation\_1-logloss:0.298873
- [707] validation\_0-error:0.079547 validation\_0-loglos s:0.23964 validation\_1-error:0.115995 validation\_1-logloss:0.298883
- [708] validation\_0-error:0.079421 validation\_0-loglos s:0.239474 validation\_1-error:0.11713 validation\_1-logloss:0.298915
- [709] validation\_0-error:0.079211 validation\_0-loglos s:0.239323 validation\_1-error:0.116279 validation\_1-logloss:0.29891
- [710] validation\_0-error:0.079169 validation\_0-loglos s:0.239179 validation\_1-error:0.116279 validation\_1-logloss:0.298828
- [711] validation\_0-error:0.078832 validation\_0-loglos s:0.239079 validation\_1-error:0.116846 validation\_1-logloss:0.298898
- [712] validation\_0-error:0.078874 validation\_0-loglos s:0.238957 validation\_1-error:0.117413 validation\_1-logloss:0.298772

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[713] validation_0-error:0.079085 validation_0-loglos s:0.238804 validation_1-error:0.116563 validation_1-logloss:0.298726
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- [714] validation\_0-error:0.078958 validation\_0-loglos s:0.238596 validation\_1-error:0.116279 validation\_1-logloss:0.298503
- [715] validation\_0-error:0.078832 validation\_0-loglos s:0.238508 validation\_1-error:0.115995 validation\_1-logloss:0.298505
- [716] validation\_0-error:0.078538 validation\_0-loglos s:0.238345 validation\_1-error:0.115995 validation\_1-logloss:0.298542
- [717] validation\_0-error:0.078201 validation\_0-loglos s:0.23819 validation\_1-error:0.115995 validation\_1-logloss:0.298393
- [718] validation\_0-error:0.078033 validation\_0-loglos s:0.238038 validation\_1-error:0.115995 validation\_1-logloss:0.298365
- [719] validation\_0-error:0.078159 validation\_0-loglos s:0.237879 validation\_1-error:0.115428 validation\_1-logloss:0.298252
- [720] validation\_0-error:0.077949 validation\_0-loglos s:0.237724 validation\_1-error:0.115712 validation\_1-logloss:0.298198
- [721] validation\_0-error:0.077907 validation\_0-loglos s:0.237556 validation\_1-error:0.11713 validation\_1-logloss:0.298189
- [722] validation\_0-error:0.077865 validation\_0-loglos s:0.237428 validation\_1-error:0.116846 validation\_1-logloss:0.298278
- [723] validation\_0-error:0.077739 validation\_0-loglos s:0.237274 validation\_1-error:0.116563 validation\_1-logloss:0.298196
- [724] validation\_0-error:0.077949 validation\_0-loglos s:0.237113 validation\_1-error:0.116563 validation\_1-logloss:0.298075
- [725] validation\_0-error:0.077991 validation\_0-loglos s:0.237014 validation\_1-error:0.116846 validation\_1-logloss:0.297933
- [726] validation\_0-error:0.077654 validation\_0-loglos s:0.236828 validation\_1-error:0.116846 validation\_1-logloss:0.297983

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[727] validation_0-error:0.077612 validation_0-loglos s:0.236737 validation_1-error:0.116563 validation_1-logloss:0.297891
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- [728] validation\_0-error:0.077612 validation\_0-loglos s:0.236637 validation\_1-error:0.116279 validation\_1-logloss:0.297808
- [729] validation\_0-error:0.077654 validation\_0-loglos s:0.236458 validation\_1-error:0.115995 validation\_1-logloss:0.297764
- [730] validation\_0-error:0.077528 validation\_0-loglos s:0.236329 validation\_1-error:0.115428 validation\_1-logloss:0.29763
- [731] validation\_0-error:0.077654 validation\_0-loglos s:0.236215 validation\_1-error:0.115145 validation\_1-logloss:0.29761
- [732] validation\_0-error:0.077486 validation\_0-loglos s:0.236074 validation\_1-error:0.114861 validation\_1-logloss:0.297568
- [733] validation\_0-error:0.077318 validation\_0-loglos s:0.2359 validation\_1-error:0.115428 validation\_1-logloss:0.297516
- [734] validation\_0-error:0.077276 validation\_0-loglos s:0.235779 validation\_1-error:0.116279 validation\_1-logloss:0.297437
- [735] validation\_0-error:0.076897 validation\_0-loglos s:0.235631 validation\_1-error:0.115712 validation\_1-logloss:0.297272
- [736] validation\_0-error:0.076897 validation\_0-loglos s:0.235498 validation\_1-error:0.115428 validation\_1-logloss:0.297219
- [737] validation\_0-error:0.076813 validation\_0-loglos s:0.235399 validation\_1-error:0.116846 validation\_1-logloss:0.297163
- [738] validation\_0-error:0.076813 validation\_0-loglos s:0.235253 validation\_1-error:0.117413 validation\_1-logloss:0.297044
- [739] validation\_0-error:0.077023 validation\_0-loglos s:0.235081 validation\_1-error:0.116846 validation\_1-logloss:0.297083
- [740] validation\_0-error:0.076897 validation\_0-loglos s:0.234935 validation\_1-error:0.115995 validation\_1-logloss:0.297091

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[741] validation_0-error:0.076645 validation_0-loglos s:0.234804 validation_1-error:0.115712 validation_1-logloss:0.297055
```

- [742] validation\_0-error:0.076687 validation\_0-loglos s:0.234704 validation\_1-error:0.116563 validation\_1-logloss:0.297039
- [743] validation\_0-error:0.076729 validation\_0-loglos s:0.234573 validation\_1-error:0.116563 validation\_1-logloss:0.297115
- [744] validation\_0-error:0.076477 validation\_0-loglos s:0.23445 validation\_1-error:0.11713 validation\_1-logloss:0.297176
- [745] validation\_0-error:0.076477 validation\_0-loglos s:0.234291 validation\_1-error:0.117697 validation\_1-logloss:0.297155
- [746] validation\_0-error:0.076687 validation\_0-loglos s:0.234098 validation\_1-error:0.117697 validation\_1-logloss:0.296974
- [747] validation\_0-error:0.076519 validation\_0-loglos s:0.233919 validation\_1-error:0.117413 validation\_1-logloss:0.296884
- [748] validation\_0-error:0.076477 validation\_0-loglos s:0.23378 validation\_1-error:0.117697 validation\_1-logloss:0.296942
- [749] validation\_0-error:0.076266 validation\_0-loglos s:0.233651 validation\_1-error:0.117413 validation\_1-logloss:0.296881
- [750] validation\_0-error:0.076056 validation\_0-loglos s:0.233502 validation\_1-error:0.117413 validation\_1-logloss:0.296762
- [751] validation\_0-error:0.075635 validation\_0-loglos s:0.233346 validation\_1-error:0.116563 validation\_1-logloss:0.296742
- [752] validation\_0-error:0.075761 validation\_0-loglos s:0.233179 validation\_1-error:0.116846 validation\_1-logloss:0.296748
- [753] validation\_0-error:0.075467 validation\_0-loglos s:0.233052 validation\_1-error:0.116563 validation\_1-logloss:0.296765
- [754] validation\_0-error:0.075257 validation\_0-loglos s:0.232885 validation\_1-error:0.115995 validation\_1-logloss:0.296635

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[755] validation 0-error:0.075215 validation 0-loglos
s:0.232767 validation 1-error:0.115428
                                         validation 1-
logloss:0.296591
[756] validation 0-error:0.075383 validation 0-loglos
s:0.232612 validation 1-error:0.116563
                                         validation 1-
logloss:0.296529
[757] validation 0-error:0.075341 validation 0-loglos
s:0.232527 validation 1-error:0.116846
                                         validation 1-
logloss:0.296559
[758] validation 0-error:0.075299 validation 0-loglos
s:0.232392 validation 1-error:0.11713
                                         validation 1-
logloss:0.296489
[759] validation 0-error:0.075215 validation 0-loglos
s:0.232286 validation 1-error:0.11713 validation 1-
logloss:0.296432
[760] validation 0-error:0.074836 validation 0-loglos
          validation 1-error:0.11713 validation 1-
s:0.232129
logloss:0.296398
[761] validation 0-error:0.074626 validation 0-loglos
s:0.23197
          validation 1-error:0.117697
                                         validation 1-
logloss:0.296374
[762] validation 0-error:0.074626 validation 0-loglos
          validation 1-error:0.117413
                                         validation 1-
s:0.231854
logloss:0.296348
[763] validation 0-error:0.074541 validation 0-loglos
           validation 1-error:0.117697 validation 1-
s:0.231738
logloss:0.296253
[764] validation 0-error:0.074584 validation 0-loglos
          validation 1-error:0.117697
s:0.231633
                                         validation 1-
logloss:0.296187
[765] validation 0-error:0.074373 validation 0-loglos
          validation 1-error:0.117697
                                         validation 1-
s:0.231473
logloss:0.296088
[766] validation 0-error:0.074331 validation 0-loglos
           validation 1-error:0.118264 validation 1-
s:0.231343
logloss:0.296198
[767] validation 0-error:0.074541 validation 0-loglos
s:0.231196 validation 1-error:0.117413 validation 1-
logloss:0.296142
[768] validation 0-error:0.074457 validation 0-loglos
s:0.231115 validation 1-error:0.116846 validation 1-
logloss:0.296221
```

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[769] validation 0-error:0.074289 validation 0-loglos
           validation 1-error:0.116846
                                         validation 1-
s:0.23096
logloss:0.296206
[770] validation 0-error:0.074205 validation 0-loglos
s:0.230813 validation 1-error:0.11713
                                         validation 1-
logloss:0.296126
[771] validation 0-error:0.074331 validation 0-loglos
s:0.230698 validation 1-error:0.116279 validation 1-
logloss:0.296055
[772] validation 0-error:0.073953 validation 0-loglos
s:0.230545 validation 1-error:0.11713
                                         validation 1-
logloss:0.29593
[773] validation 0-error:0.07391 validation 0-loglos
s:0.230416 validation 1-error:0.116279 validation 1-
logloss:0.295813
[774] validation 0-error:0.074079 validation 0-loglos
          validation 1-error:0.116563 validation 1-
s:0.230236
logloss:0.295683
[775] validation 0-error:0.073826 validation 0-loglos
s:0.230118
          validation 1-error:0.116846
                                         validation 1-
logloss:0.295711
[776] validation 0-error:0.073784 validation 0-loglos
          validation 1-error:0.117413
                                         validation 1-
s:0.229975
logloss:0.295699
[777] validation 0-error:0.073111 validation 0-loglos
           validation 1-error:0.117413
                                         validation 1-
s:0.229845
logloss:0.29566
[778] validation 0-error:0.073322 validation 0-loglos
           validation 1-error:0.118264
s:0.229701
                                         validation 1-
logloss:0.295531
[779] validation 0-error:0.073027 validation 0-loglos
          validation 1-error:0.118264
                                         validation 1-
s:0.229602
logloss:0.295452
[780] validation 0-error:0.072901 validation 0-loglos
          validation 1-error:0.117413 validation 1-
s:0.229487
logloss:0.295436
[781] validation 0-error:0.072606 validation 0-loglos
s:0.229353 validation 1-error:0.117413 validation 1-
logloss:0.295384
[782] validation 0-error:0.072775 validation 0-loglos
s:0.229199 validation 1-error:0.117697 validation 1-
```

logloss:0.295425

```
[783] validation_0-error:0.072859 validation_0-loglos s:0.229052 validation_1-error:0.117697 validation_1-logloss:0.295295 validation 0-error:0.072733 validation 0-loglos
```

- [784] validation\_0-error:0.072733 validation\_0-loglos s:0.228898 validation\_1-error:0.117697 validation\_1-logloss:0.295178
- [785] validation\_0-error:0.072817 validation\_0-loglos s:0.228701 validation\_1-error:0.118548 validation\_1-logloss:0.294975
- [786] validation\_0-error:0.072901 validation\_0-loglos s:0.228541 validation\_1-error:0.118264 validation\_1-logloss:0.29481
- [787] validation\_0-error:0.072648 validation\_0-loglos s:0.228392 validation\_1-error:0.117981 validation\_1-logloss:0.294719
- [788] validation\_0-error:0.072775 validation\_0-loglos s:0.228232 validation\_1-error:0.117697 validation\_1-logloss:0.294627
- [789] validation\_0-error:0.072606 validation\_0-loglos s:0.228094 validation\_1-error:0.117697 validation\_1-logloss:0.29454
- [790] validation\_0-error:0.072312 validation\_0-loglos s:0.227952 validation\_1-error:0.116846 validation\_1-logloss:0.294513
- [791] validation\_0-error:0.07248 validation\_0-loglos s:0.227782 validation\_1-error:0.116563 validation\_1-logloss:0.294423
- [792] validation\_0-error:0.07227 validation\_0-loglos s:0.227627 validation\_1-error:0.115995 validation\_1-logloss:0.29428
- [793] validation\_0-error:0.072438 validation\_0-loglos s:0.227481 validation\_1-error:0.115995 validation\_1-logloss:0.294166
- [794] validation\_0-error:0.07248 validation\_0-loglos s:0.227357 validation\_1-error:0.115995 validation\_1-logloss:0.294092
- [795] validation\_0-error:0.072017 validation\_0-loglos s:0.227193 validation\_1-error:0.115428 validation\_1-logloss:0.293976
- [796] validation\_0-error:0.071807 validation\_0-loglos s:0.227069 validation\_1-error:0.115712 validation\_1-logloss:0.29403

```
[797] validation_0-error:0.071849 validation_0-loglos s:0.226935 validation_1-error:0.115995 validation_1-logloss:0.294014
```

- [798] validation\_0-error:0.071723 validation\_0-loglos s:0.226793 validation\_1-error:0.115995 validation\_1-logloss:0.293849
- [799] validation\_0-error:0.071344 validation\_0-loglos s:0.22667 validation\_1-error:0.116279 validation\_1-logloss:0.293727
- [800] validation\_0-error:0.071471 validation\_0-loglos s:0.226506 validation\_1-error:0.116563 validation\_1-logloss:0.293728
- [801] validation\_0-error:0.071807 validation\_0-loglos s:0.226374 validation\_1-error:0.11713 validation\_1-logloss:0.293781
- [802] validation\_0-error:0.071681 validation\_0-loglos s:0.226235 validation\_1-error:0.117413 validation\_1-logloss:0.293633
- [803] validation\_0-error:0.071471 validation\_0-loglos s:0.226063 validation\_1-error:0.117413 validation\_1-logloss:0.293549
- [804] validation\_0-error:0.071218 validation\_0-loglos s:0.225914 validation\_1-error:0.11713 validation\_1-logloss:0.293518
- [805] validation\_0-error:0.071302 validation\_0-loglos s:0.225771 validation\_1-error:0.116563 validation\_1-logloss:0.293471
- [806] validation\_0-error:0.071387 validation\_0-loglos s:0.225639 validation\_1-error:0.11713 validation\_1-logloss:0.293484
- [807] validation\_0-error:0.07126 validation\_0-loglos s:0.225479 validation\_1-error:0.117697 validation\_1-logloss:0.293487
- [808] validation\_0-error:0.071302 validation\_0-loglos s:0.225321 validation\_1-error:0.118548 validation\_1-logloss:0.293465
- [809] validation\_0-error:0.070924 validation\_0-loglos s:0.225214 validation\_1-error:0.117981 validation\_1-logloss:0.293498
- [810] validation\_0-error:0.070671 validation\_0-loglos s:0.225091 validation\_1-error:0.117981 validation\_1-logloss:0.293592

- [811] validation\_0-error:0.070503 validation\_0-loglos s:0.224948 validation\_1-error:0.117981 validation\_1-logloss:0.29343
- [812] validation\_0-error:0.070629 validation\_0-loglos s:0.224854 validation\_1-error:0.117981 validation\_1-logloss:0.29332
- [813] validation\_0-error:0.070629 validation\_0-loglos s:0.224727 validation\_1-error:0.117697 validation\_1-logloss:0.293281
- [814] validation\_0-error:0.070209 validation\_0-loglos s:0.224561 validation\_1-error:0.117413 validation\_1-logloss:0.293186
- [815] validation\_0-error:0.070461 validation\_0-loglos s:0.224419 validation\_1-error:0.118548 validation\_1-logloss:0.293143
- [816] validation\_0-error:0.070671 validation\_0-loglos s:0.22429 validation\_1-error:0.118548 validation\_1-logloss:0.2932
- [817] validation\_0-error:0.070671 validation\_0-loglos s:0.224174 validation\_1-error:0.118548 validation\_1-logloss:0.293266
- [818] validation\_0-error:0.070461 validation\_0-loglos s:0.224047 validation\_1-error:0.117981 validation\_1-logloss:0.293123
- [819] validation\_0-error:0.070461 validation\_0-loglos s:0.223936 validation\_1-error:0.118548 validation\_1-logloss:0.293054
- [820] validation\_0-error:0.069914 validation\_0-loglos s:0.223854 validation\_1-error:0.117981 validation\_1-logloss:0.293101
- [821] validation\_0-error:0.069662 validation\_0-loglos s:0.223744 validation\_1-error:0.117413 validation\_1-logloss:0.293068
- [822] validation\_0-error:0.069704 validation\_0-loglos s:0.223584 validation\_1-error:0.117697 validation\_1-logloss:0.293121
- [823] validation\_0-error:0.06962 validation\_0-loglos s:0.223415 validation\_1-error:0.118264 validation\_1-logloss:0.293143
- [824] validation\_0-error:0.069746 validation\_0-loglos s:0.223262 validation\_1-error:0.117981 validation\_1-logloss:0.29319

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[825] validation_0-error:0.069409 validation_0-loglos s:0.223102 validation_1-error:0.117413 validation_1-logloss:0.29314
```

- [826] validation\_0-error:0.069536 validation\_0-loglos s:0.22298 validation\_1-error:0.11713 validation\_1-logloss:0.293021
- [827] validation\_0-error:0.069536 validation\_0-loglos s:0.222847 validation\_1-error:0.115995 validation\_1-logloss:0.292872
- [828] validation\_0-error:0.069578 validation\_0-loglos s:0.222715 validation\_1-error:0.116563 validation\_1-logloss:0.292889
- [829] validation\_0-error:0.069283 validation\_0-loglos s:0.222592 validation\_1-error:0.116563 validation\_1-logloss:0.292851
- [830] validation\_0-error:0.069409 validation\_0-loglos s:0.222489 validation\_1-error:0.116846 validation\_1-logloss:0.292723
- [831] validation\_0-error:0.069536 validation\_0-loglos s:0.222336 validation\_1-error:0.116846 validation\_1-logloss:0.292582
- [832] validation\_0-error:0.069662 validation\_0-loglos s:0.222205 validation\_1-error:0.117697 validation\_1-logloss:0.292401
- [833] validation\_0-error:0.069451 validation\_0-loglos s:0.222091 validation\_1-error:0.11713 validation\_1-logloss:0.292422
- [834] validation\_0-error:0.069325 validation\_0-loglos s:0.221912 validation\_1-error:0.117413 validation\_1-logloss:0.292252
- [835] validation\_0-error:0.069662 validation\_0-loglos s:0.221813 validation\_1-error:0.117413 validation\_1-logloss:0.292293
- [836] validation\_0-error:0.069494 validation\_0-loglos s:0.221665 validation\_1-error:0.116563 validation\_1-logloss:0.292204
- [837] validation\_0-error:0.069536 validation\_0-loglos s:0.221544 validation\_1-error:0.11713 validation\_1-logloss:0.292012
- [838] validation\_0-error:0.069283 validation\_0-loglos s:0.221418 validation\_1-error:0.116846 validation\_1-logloss:0.291969

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[839] validation_0-error:0.069536 validation_0-loglos s:0.221323 validation_1-error:0.117413 validation_1-logloss:0.291891
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- [840] validation\_0-error:0.069451 validation\_0-loglos s:0.221185 validation\_1-error:0.117981 validation\_1-logloss:0.291802
- [841] validation\_0-error:0.069367 validation\_0-loglos s:0.221092 validation\_1-error:0.11713 validation\_1-logloss:0.291695
- [842] validation\_0-error:0.069115 validation\_0-loglos s:0.220956 validation\_1-error:0.115428 validation\_1-logloss:0.291643
- [843] validation\_0-error:0.068778 validation\_0-loglos s:0.220787 validation\_1-error:0.116279 validation\_1-logloss:0.291711
- [844] validation\_0-error:0.068568 validation\_0-loglos s:0.220668 validation\_1-error:0.115995 validation\_1-logloss:0.291695
- [845] validation\_0-error:0.068568 validation\_0-loglos s:0.220554 validation\_1-error:0.115712 validation\_1-logloss:0.2917
- [846] validation\_0-error:0.068863 validation\_0-loglos s:0.220432 validation\_1-error:0.115995 validation\_1-logloss:0.291593
- [847] validation\_0-error:0.068694 validation\_0-loglos s:0.220278 validation\_1-error:0.115145 validation\_1-logloss:0.291478
- [848] validation\_0-error:0.068694 validation\_0-loglos s:0.220173 validation\_1-error:0.115712 validation\_1-logloss:0.291497
- [849] validation\_0-error:0.06882 validation\_0-loglos s:0.220043 validation\_1-error:0.115428 validation\_1-logloss:0.291511
- [850] validation\_0-error:0.068778 validation\_0-loglos s:0.219921 validation\_1-error:0.115995 validation\_1-logloss:0.291518
- [851] validation\_0-error:0.068736 validation\_0-loglos s:0.219803 validation\_1-error:0.115712 validation\_1-logloss:0.291543
- [852] validation\_0-error:0.068652 validation\_0-loglos s:0.219657 validation\_1-error:0.115995 validation\_1-logloss:0.291407

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[853] validation_0-error:0.068442 validation_0-loglos
s:0.219578 validation_1-error:0.115995 validation_1-
logloss:0.29141
```

- [854] validation\_0-error:0.068358 validation\_0-loglos s:0.219477 validation\_1-error:0.115712 validation\_1-logloss:0.291389
- [855] validation\_0-error:0.068232 validation\_0-loglos s:0.219369 validation\_1-error:0.116563 validation\_1-logloss:0.29138
- [856] validation\_0-error:0.068232 validation\_0-loglos s:0.21922 validation\_1-error:0.116279 validation\_1-logloss:0.291364
- [857] validation\_0-error:0.068147 validation\_0-loglos s:0.219108 validation\_1-error:0.115712 validation\_1-logloss:0.291367
- [858] validation\_0-error:0.068105 validation\_0-loglos s:0.219 validation\_1-error:0.115712 validation\_1-logloss:0.291341
- [859] validation\_0-error:0.067979 validation\_0-loglos s:0.218857 validation\_1-error:0.115712 validation\_1-logloss:0.29137
- [860] validation\_0-error:0.067727 validation\_0-loglos s:0.218765 validation\_1-error:0.115712 validation\_1-logloss:0.291268
- [861] validation\_0-error:0.067685 validation\_0-loglos s:0.218616 validation\_1-error:0.115145 validation\_1-logloss:0.291157
- [862] validation\_0-error:0.067643 validation\_0-loglos s:0.218466 validation\_1-error:0.115145 validation\_1-logloss:0.291188
- [863] validation\_0-error:0.067727 validation\_0-loglos s:0.218369 validation\_1-error:0.114861 validation\_1-logloss:0.291176
- [864] validation\_0-error:0.067516 validation\_0-loglos s:0.218241 validation\_1-error:0.115428 validation\_1-logloss:0.29115
- [865] validation\_0-error:0.067474 validation\_0-loglos s:0.218094 validation\_1-error:0.115712 validation\_1-logloss:0.291142
- [866] validation\_0-error:0.067601 validation\_0-loglos s:0.217966 validation\_1-error:0.115712 validation\_1-logloss:0.291077

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[867] validation_0-error:0.067432 validation_0-loglos s:0.217847 validation_1-error:0.115428 validation_1-logloss:0.291031
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- [868] validation\_0-error:0.067264 validation\_0-loglos s:0.217717 validation\_1-error:0.115712 validation\_1-logloss:0.290898
- [869] validation\_0-error:0.06718 validation\_0-loglos s:0.217604 validation\_1-error:0.115995 validation\_1-logloss:0.290815
- [870] validation\_0-error:0.067306 validation\_0-loglos s:0.217489 validation\_1-error:0.115995 validation\_1-logloss:0.290747
- [871] validation\_0-error:0.06739 validation\_0-loglos s:0.217368 validation\_1-error:0.115712 validation\_1-logloss:0.290705
- [872] validation\_0-error:0.067264 validation\_0-loglos s:0.21723 validation\_1-error:0.115428 validation\_1-logloss:0.290692
- [873] validation\_0-error:0.06697 validation\_0-loglos s:0.217115 validation\_1-error:0.115428 validation\_1-logloss:0.290457
- [874] validation\_0-error:0.066885 validation\_0-loglos s:0.217031 validation\_1-error:0.115712 validation\_1-logloss:0.290469
- [875] validation\_0-error:0.066549 validation\_0-loglos s:0.216897 validation\_1-error:0.115995 validation\_1-logloss:0.290462
- [876] validation\_0-error:0.066759 validation\_0-loglos s:0.216779 validation\_1-error:0.115995 validation\_1-logloss:0.290434
- [877] validation\_0-error:0.066717 validation\_0-loglos s:0.216673 validation\_1-error:0.116279 validation\_1-logloss:0.290391
- [878] validation\_0-error:0.066717 validation\_0-loglos s:0.216527 validation\_1-error:0.116279 validation\_1-logloss:0.290408
- [879] validation\_0-error:0.066717 validation\_0-loglos s:0.216397 validation\_1-error:0.116279 validation\_1-logloss:0.290401
- [880] validation\_0-error:0.066843 validation\_0-loglos s:0.216275 validation\_1-error:0.116563 validation\_1-logloss:0.29039

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[881] validation_0-error:0.066843 validation_0-loglos s:0.216184 validation_1-error:0.116279 validation_1-logloss:0.290323
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- [882] validation\_0-error:0.066843 validation\_0-loglos s:0.216101 validation\_1-error:0.116279 validation\_1-logloss:0.2903
- [883] validation\_0-error:0.066675 validation\_0-loglos s:0.215988 validation\_1-error:0.116279 validation\_1-logloss:0.290272
- [884] validation\_0-error:0.066549 validation\_0-loglos s:0.215861 validation\_1-error:0.116279 validation\_1-logloss:0.290267
- [885] validation\_0-error:0.066507 validation\_0-loglos s:0.21573 validation\_1-error:0.115145 validation\_1-logloss:0.290234
- [886] validation\_0-error:0.066465 validation\_0-loglos s:0.215583 validation\_1-error:0.115428 validation\_1-logloss:0.290215
- [887] validation\_0-error:0.066339 validation\_0-loglos s:0.215449 validation\_1-error:0.115428 validation\_1-logloss:0.29016
- [888] validation\_0-error:0.065665 validation\_0-loglos s:0.215312 validation\_1-error:0.115712 validation\_1-logloss:0.290243
- [889] validation\_0-error:0.065581 validation\_0-loglos s:0.215197 validation\_1-error:0.115712 validation\_1-logloss:0.290162
- [890] validation\_0-error:0.065792 validation\_0-loglos s:0.215092 validation\_1-error:0.115712 validation\_1-logloss:0.290116
- [891] validation\_0-error:0.065539 validation\_0-loglos s:0.214975 validation\_1-error:0.115995 validation\_1-logloss:0.290077
- [892] validation\_0-error:0.065413 validation\_0-loglos s:0.214831 validation\_1-error:0.115428 validation\_1-logloss:0.289977
- [893] validation\_0-error:0.065161 validation\_0-loglos s:0.214732 validation\_1-error:0.115995 validation\_1-logloss:0.290028
- [894] validation\_0-error:0.065287 validation\_0-loglos s:0.21458 validation\_1-error:0.115712 validation\_1-logloss:0.290026

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[895] validation_0-error:0.065287 validation_0-loglos s:0.214499 validation_1-error:0.115712 validation_1-logloss:0.289959
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- [896] validation\_0-error:0.065455 validation\_0-loglos s:0.214371 validation\_1-error:0.115995 validation\_1-logloss:0.29001
- [897] validation\_0-error:0.065329 validation\_0-loglos s:0.214279 validation\_1-error:0.115428 validation\_1-logloss:0.289836
- [898] validation\_0-error:0.065245 validation\_0-loglos s:0.214134 validation\_1-error:0.115145 validation\_1-logloss:0.289811
- [899] validation\_0-error:0.065455 validation\_0-loglos s:0.213995 validation\_1-error:0.115145 validation\_1-logloss:0.289749
- [900] validation\_0-error:0.065203 validation\_0-loglos s:0.213846 validation\_1-error:0.114294 validation\_1-logloss:0.289724
- [901] validation\_0-error:0.065203 validation\_0-loglos s:0.213721 validation\_1-error:0.114577 validation\_1-logloss:0.289763
- [902] validation\_0-error:0.064908 validation\_0-loglos s:0.213584 validation\_1-error:0.11401 validation\_1-logloss:0.28966
- [903] validation\_0-error:0.064992 validation\_0-loglos s:0.213474 validation\_1-error:0.113727 validation\_1-logloss:0.289621
- [904] validation\_0-error:0.064866 validation\_0-loglos s:0.213336 validation\_1-error:0.11401 validation\_1-logloss:0.289591
- [905] validation\_0-error:0.064908 validation\_0-loglos s:0.213267 validation\_1-error:0.11401 validation\_1-logloss:0.289626
- [906] validation\_0-error:0.064782 validation\_0-loglos s:0.213199 validation\_1-error:0.113727 validation\_1-logloss:0.289614
- [907] validation\_0-error:0.064782 validation\_0-loglos s:0.213076 validation\_1-error:0.114294 validation\_1-logloss:0.289534
- [908] validation\_0-error:0.064992 validation\_0-loglos s:0.212933 validation\_1-error:0.11401 validation\_1-logloss:0.28958

- [909] validation\_0-error:0.064572 validation\_0-loglos s:0.212804 validation\_1-error:0.115145 validation\_1-logloss:0.289649
- [910] validation\_0-error:0.06453 validation\_0-loglos s:0.212712 validation\_1-error:0.115428 validation\_1-logloss:0.289622
- [911] validation\_0-error:0.064488 validation\_0-loglos s:0.212563 validation\_1-error:0.115995 validation\_1-logloss:0.289534
- [912] validation\_0-error:0.064361 validation\_0-loglos s:0.212469 validation\_1-error:0.116279 validation\_1-logloss:0.289443
- [913] validation\_0-error:0.064193 validation\_0-loglos s:0.212387 validation\_1-error:0.115995 validation\_1-logloss:0.289474
- [914] validation\_0-error:0.064277 validation\_0-loglos s:0.212264 validation\_1-error:0.115712 validation\_1-logloss:0.289417
- [915] validation\_0-error:0.064277 validation\_0-loglos s:0.21214 validation\_1-error:0.115712 validation\_1-logloss:0.289344
- [916] validation\_0-error:0.064235 validation\_0-loglos s:0.212025 validation\_1-error:0.115995 validation\_1-logloss:0.289346
- [917] validation\_0-error:0.064235 validation\_0-loglos s:0.211894 validation\_1-error:0.116279 validation\_1-logloss:0.289343
- [918] validation\_0-error:0.064025 validation\_0-loglos s:0.211806 validation\_1-error:0.115995 validation\_1-logloss:0.289403
- [919] validation\_0-error:0.063941 validation\_0-loglos s:0.211666 validation\_1-error:0.115995 validation\_1-logloss:0.289553
- [920] validation\_0-error:0.063857 validation\_0-loglos s:0.211526 validation\_1-error:0.115145 validation\_1-logloss:0.289413
- [921] validation\_0-error:0.063899 validation\_0-loglos s:0.211406 validation\_1-error:0.115145 validation\_1-logloss:0.289399
- [922] validation\_0-error:0.064067 validation\_0-loglos s:0.211282 validation\_1-error:0.115145 validation\_1-logloss:0.289298

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[923] validation_0-error:0.063773 validation_0-loglos s:0.2112 validation_1-error:0.115712 validation_1-logloss:0.289304
```

- [924] validation\_0-error:0.063983 validation\_0-loglos s:0.211086 validation\_1-error:0.115712 validation\_1-logloss:0.289248
- [925] validation\_0-error:0.063773 validation\_0-loglos s:0.210972 validation\_1-error:0.115712 validation\_1-logloss:0.289286
- [926] validation\_0-error:0.063815 validation\_0-loglos s:0.210834 validation\_1-error:0.116279 validation\_1-logloss:0.28929
- [927] validation\_0-error:0.063815 validation\_0-loglos s:0.2107 validation\_1-error:0.115712 validation\_1-logloss:0.289224
- [928] validation\_0-error:0.06352 validation\_0-loglos s:0.210567 validation\_1-error:0.116279 validation\_1-logloss:0.289359
- [929] validation\_0-error:0.063394 validation\_0-loglos s:0.210503 validation\_1-error:0.115712 validation\_1-logloss:0.289274
- [930] validation\_0-error:0.063352 validation\_0-loglos s:0.210381 validation\_1-error:0.115428 validation\_1-logloss:0.289188
- [931] validation\_0-error:0.063394 validation\_0-loglos s:0.210303 validation\_1-error:0.115712 validation\_1-logloss:0.289166
- [932] validation\_0-error:0.063352 validation\_0-loglos s:0.210167 validation\_1-error:0.114861 validation\_1-logloss:0.289035
- [933] validation\_0-error:0.063226 validation\_0-loglos s:0.210054 validation\_1-error:0.114577 validation\_1-logloss:0.28904
- [934] validation\_0-error:0.063394 validation\_0-loglos s:0.209927 validation\_1-error:0.113727 validation\_1-logloss:0.288949
- [935] validation\_0-error:0.063436 validation\_0-loglos s:0.209837 validation\_1-error:0.114294 validation\_1-logloss:0.288989
- [936] validation\_0-error:0.063352 validation\_0-loglos s:0.209715 validation\_1-error:0.11401 validation\_1-logloss:0.288886

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[937] validation_0-error:0.063352 validation_0-loglos s:0.209614 validation_1-error:0.114861 validation_1-logloss:0.288966
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- [938] validation\_0-error:0.063184 validation\_0-loglos s:0.209537 validation\_1-error:0.114577 validation\_1-logloss:0.288984
- [939] validation\_0-error:0.063184 validation\_0-loglos s:0.209398 validation\_1-error:0.11401 validation\_1-logloss:0.288829
- [940] validation\_0-error:0.063099 validation\_0-loglos s:0.209298 validation\_1-error:0.113727 validation\_1-logloss:0.288807
- [941] validation\_0-error:0.063142 validation\_0-loglos s:0.209218 validation\_1-error:0.113159 validation\_1-logloss:0.288765
- [942] validation\_0-error:0.063015 validation\_0-loglos s:0.209061 validation\_1-error:0.114294 validation\_1-logloss:0.288592
- [943] validation\_0-error:0.063184 validation\_0-loglos s:0.208952 validation\_1-error:0.114294 validation\_1-logloss:0.28859
- [944] validation\_0-error:0.063142 validation\_0-loglos s:0.208837 validation\_1-error:0.114294 validation\_1-logloss:0.288532
- [945] validation\_0-error:0.062847 validation\_0-loglos s:0.208736 validation\_1-error:0.114294 validation\_1-logloss:0.288381
- [946] validation\_0-error:0.062973 validation\_0-loglos s:0.208573 validation\_1-error:0.11401 validation\_1-logloss:0.288212
- [947] validation\_0-error:0.062889 validation\_0-loglos s:0.208461 validation\_1-error:0.114294 validation\_1-logloss:0.288194
- [948] validation\_0-error:0.062721 validation\_0-loglos s:0.208357 validation\_1-error:0.11401 validation\_1-logloss:0.288088
- [949] validation\_0-error:0.062468 validation\_0-loglos s:0.208254 validation\_1-error:0.11401 validation\_1-logloss:0.287926
- [950] validation\_0-error:0.062637 validation\_0-loglos s:0.208154 validation\_1-error:0.11401 validation\_1-logloss:0.28788

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[951] validation_0-error:0.062511 validation_0-loglos s:0.208034 validation_1-error:0.11401 validation_1-logloss:0.287677
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- [952] validation\_0-error:0.062426 validation\_0-loglos s:0.207956 validation\_1-error:0.11401 validation\_1-logloss:0.287626
- [953] validation\_0-error:0.0623 validation\_0-logloss:0.20
  7845 validation\_1-error:0.114294 validation\_1-loglos
  s:0.287651
- [954] validation\_0-error:0.062216 validation\_0-loglos s:0.207737 validation\_1-error:0.114577 validation\_1-logloss:0.28778
- [955] validation\_0-error:0.0623 validation\_0-logloss:0.20
  759 validation\_1-error:0.115145 validation\_1-loglos
  s:0.287735
- [956] validation\_0-error:0.062342 validation\_0-loglos s:0.20752 validation\_1-error:0.115428 validation\_1-logloss:0.287689
- [957] validation\_0-error:0.062006 validation\_0-loglos s:0.207396 validation\_1-error:0.115428 validation\_1-logloss:0.287775
- [958] validation\_0-error:0.062048 validation\_0-loglos s:0.20727 validation\_1-error:0.114577 validation\_1-logloss:0.287671
- [959] validation\_0-error:0.06209 validation\_0-loglos s:0.207149 validation\_1-error:0.115428 validation\_1-logloss:0.287576
- [960] validation\_0-error:0.062048 validation\_0-loglos s:0.207035 validation\_1-error:0.115428 validation\_1-logloss:0.287501
- [961] validation\_0-error:0.061964 validation\_0-loglos s:0.206899 validation\_1-error:0.114577 validation\_1-logloss:0.287509
- [962] validation\_0-error:0.061669 validation\_0-loglos s:0.20677 validation\_1-error:0.114861 validation\_1-logloss:0.287593
- [963] validation\_0-error:0.061585 validation\_0-loglos s:0.206653 validation\_1-error:0.115428 validation\_1-logloss:0.287681
- [964] validation\_0-error:0.061501 validation\_0-loglos s:0.206526 validation\_1-error:0.115428 validation\_1-logloss:0.28756

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[965] validation_0-error:0.061543 validation_0-loglos s:0.20646 validation_1-error:0.115428 validation_1-logloss:0.287666
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- [966] validation\_0-error:0.061543 validation\_0-loglos s:0.206335 validation\_1-error:0.115995 validation\_1-logloss:0.287541
- [967] validation\_0-error:0.061711 validation\_0-loglos s:0.206241 validation\_1-error:0.115428 validation\_1-logloss:0.287479
- [968] validation\_0-error:0.061795 validation\_0-loglos s:0.206104 validation\_1-error:0.115428 validation\_1-logloss:0.287546
- [969] validation\_0-error:0.061669 validation\_0-loglos s:0.205985 validation\_1-error:0.115145 validation\_1-logloss:0.287409
- [970] validation\_0-error:0.061669 validation\_0-loglos s:0.205903 validation\_1-error:0.115428 validation\_1-logloss:0.28743
- [971] validation\_0-error:0.061543 validation\_0-loglos s:0.205801 validation\_1-error:0.115712 validation\_1-logloss:0.287353
- [972] validation\_0-error:0.061459 validation\_0-loglos s:0.205674 validation\_1-error:0.115712 validation\_1-logloss:0.287399
- [973] validation\_0-error:0.061291 validation\_0-loglos s:0.205541 validation\_1-error:0.114577 validation\_1-logloss:0.287401
- [974] validation\_0-error:0.061291 validation\_0-loglos s:0.205371 validation\_1-error:0.114294 validation\_1-logloss:0.287284
- [975] validation\_0-error:0.061206 validation\_0-loglos s:0.205271 validation\_1-error:0.114294 validation\_1-logloss:0.287305
- [976] validation\_0-error:0.061122 validation\_0-loglos s:0.205175 validation\_1-error:0.114577 validation\_1-logloss:0.28734
- [977] validation\_0-error:0.06087 validation\_0-loglos s:0.205051 validation\_1-error:0.113727 validation\_1-logloss:0.287327
- [978] validation\_0-error:0.060786 validation\_0-loglos s:0.204945 validation\_1-error:0.114577 validation\_1-logloss:0.287327

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[979] validation_0-error:0.060407 validation_0-loglos s:0.204843 validation_1-error:0.115145 validation_1-logloss:0.287536
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- [980] validation\_0-error:0.060281 validation\_0-loglos s:0.204709 validation\_1-error:0.115428 validation\_1-logloss:0.287442
- [981] validation\_0-error:0.060239 validation\_0-loglos s:0.204606 validation\_1-error:0.115428 validation\_1-logloss:0.287394
- [982] validation\_0-error:0.060029 validation\_0-loglos s:0.204499 validation\_1-error:0.115428 validation\_1-logloss:0.287394
- [983] validation\_0-error:0.060155 validation\_0-loglos s:0.204397 validation\_1-error:0.115145 validation\_1-logloss:0.287412
- [984] validation\_0-error:0.060281 validation\_0-loglos s:0.204265 validation\_1-error:0.114577 validation\_1-logloss:0.287512
- [985] validation\_0-error:0.059944 validation\_0-loglos s:0.204142 validation\_1-error:0.114861 validation\_1-logloss:0.287493
- [986] validation\_0-error:0.060071 validation\_0-loglos s:0.204033 validation\_1-error:0.114294 validation\_1-logloss:0.287418
- [987] validation\_0-error:0.060449 validation\_0-loglos s:0.203933 validation\_1-error:0.115145 validation\_1-logloss:0.287359
- [988] validation\_0-error:0.059987 validation\_0-loglos s:0.203826 validation\_1-error:0.115145 validation\_1-logloss:0.287178
- [989] validation\_0-error:0.060113 validation\_0-loglos s:0.203757 validation\_1-error:0.114861 validation\_1-logloss:0.287096
- [990] validation\_0-error:0.060281 validation\_0-loglos s:0.203615 validation\_1-error:0.114861 validation\_1-logloss:0.286975
- [991] validation\_0-error:0.059944 validation\_0-loglos s:0.203488 validation\_1-error:0.114861 validation\_1-logloss:0.286992
- [992] validation\_0-error:0.059818 validation\_0-loglos s:0.203359 validation\_1-error:0.114861 validation\_1-logloss:0.287004

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[993] validation_0-error:0.059944 validation_0-loglos s:0.203257 validation_1-error:0.114861 validation_1-logloss:0.286978
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[994] validation\_0-error:0.05986 validation\_0-loglos s:0.203135 validation\_1-error:0.114577 validation\_1-logloss:0.286971

[995] validation\_0-error:0.059482 validation\_0-loglos s:0.203029 validation\_1-error:0.114577 validation\_1-logloss:0.286892

[996] validation\_0-error:0.05986 validation\_0-loglos s:0.20289 validation\_1-error:0.114861 validation\_1-logloss:0.286719

[997] validation\_0-error:0.059608 validation\_0-loglos s:0.202757 validation\_1-error:0.115428 validation\_1-logloss:0.286618

[998] validation\_0-error:0.059524 validation\_0-loglos s:0.202631 validation\_1-error:0.115712 validation\_1-logloss:0.286568

[999] validation\_0-error:0.059608 validation\_0-loglos s:0.202486 validation\_1-error:0.115712 validation\_1-logloss:0.286417

Accuracy: 88.43%